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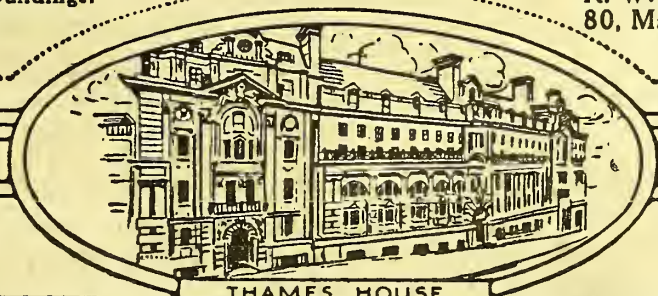

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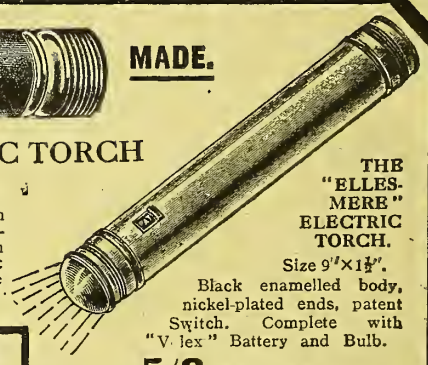

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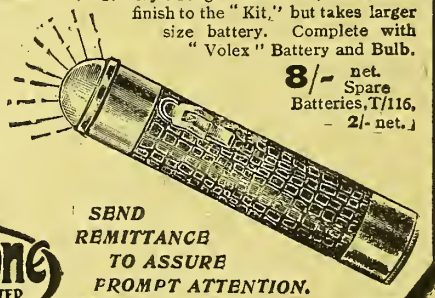

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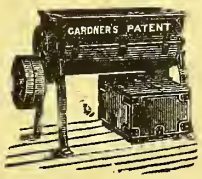

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The Holoyd Page

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An opportunity has now presented itself for its resuscitation, and, as such a journal forms an ideal channel in which to express our opinion of matters which equally concern both you and us, we have decided to renew its publication from September next.

The journal will be novel in form—to maintain paper economy, for the present, smaller than hitherto, but packed each month with interesting news concerning ourselves, our plans, and general topics.

We have placed the editing and illustrating in exceedingly capable hands, and while we can only supply to one Chemist in each district, and have already a big mailing list, we feel there are many Pharmacists whose names are not included who would welcome a regular copy.

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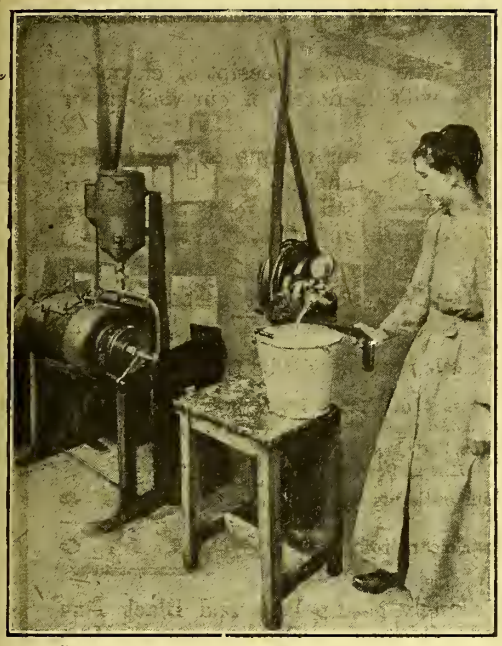

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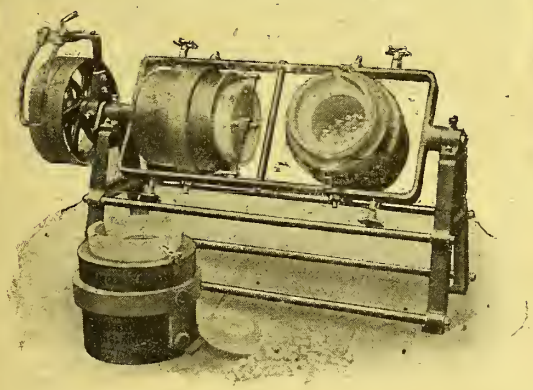

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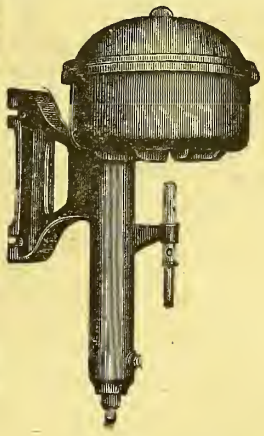

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OWING to the enormous number of orders we have on hand, and to the present-day conditions of manufacture, we strongly advise our customers to order their requirements of our "Peerless" and "Elite" Erasmic Soaps and Shaving Sticks well in advance.

All orders are subject to the prices ruling at the date of dispatch, customers having the option of cancellation.

Erasmic, Perfumers — Warrington

TITTERTON'S CELEBRATED HAIR BRUSHES

GOOD PROFITS are made by selling TITTERTON'S CELEBRATED BRUSHES (Hair, Tooth, Nail & Shaving Brushes).

They have a world-wide reputation for excellence of quality, and perfection of workmanship. Should be stocked by all Chemists desiring to give the public the best value for money.

TITTERTON & HOWARD,
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8 & 10 Great Titchfield St., London, W.1.

Bidwells' Ltd.

TOILET BRUSHES
Finest Quality.

HAIR BRUSHES

Bidwell's "GLORIA" Silverdrawn Perfect Tooth Brush
(Assorted Patterns).

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A DAINTY BRITISH PERFUME
OF GREAT FRAGRANCE.

POTTER & MOORE'S MITCHAM LAVENDER WATER

Established - 1749.

Prices:	17/-	25/-	30/-	54/-	78/-	136/- doz.	21/- each
RETAIL P.A.T.A.	2/-	3/-	3/6	6/6	9/-	16/- each	30/- each

Sole Proprietors:—

W. J. BUSH & CO., Ltd.

Ash Grove, Hackney, London, N.E.

DISTILLERY —— MITCHAM, SURREY.

Make your old Hat a new one.

In bottles, 10d. each, in separate neat cartons, with suitable brush.

These Dyes are a distinct invention, dyeing the straw without an objectionable varnished appearance, and producing the effect of new goods.

NO GLOSS. NO POLISH.

On the P.A.T.A.

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WHITAKER & CO., COLOUR WORKS, KENDAL, ENG.

London Depot: 60-62 Clerkenwell Road, E.C.

"Glossy" Series supplied if desired.

Special Non-Inflammable Series for Export. *Est. 1878*

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OVER 100 % PROFIT ENSURED & PROTECTED (P.A.T.A.)

for sellers of

Laurence's Hair Dyes

One solution, nine shades.

A first-class article with an exceptional demand, created entirely on its own merits, and carrying a first-class profit.

Size.	Minimum retail.	Minimum wholesale.	
1/-	1/-	7/6	per doz, less 5 % discount
1/6	1/6	9/-	
2/6	2/3	15/-	
3/6	3/3	21/-	

SPECIAL BONUS.

Buyers of 3 doz. bottles receive 3 bottles gratis (may be assorted and any size).

Do. 6 doz. do. 8 bottles gratis.

Do. 12 doz. do. 18 bottles gratis.

Equivalent in the case of the size in most general demand, viz. 1/6 size to 4/6, 12/- and 27/- respectively.

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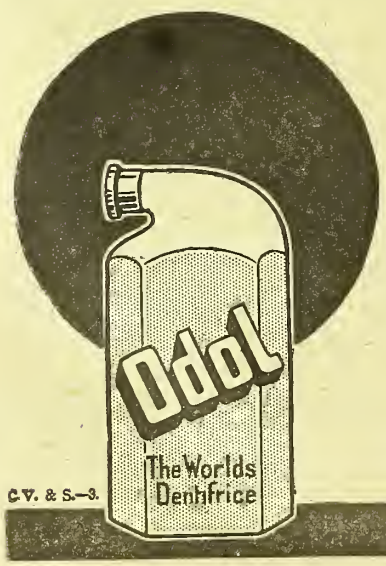

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'KO-TAL-KO'

CERTAIN IN RESULTS and CERTAIN IN SALES

THE PUBLIC WANT IT

For strong advertising has taught them its merits, and practical experience has proven its claims. "KO-TAL-KO" is the strongest recommended hair preparation on the market, and this, in conjunction with my widespread publicity, is the best of all reasons why

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Apart from quick and ready sales my trade prices allow of a fair profit to you. "KO-TAL-KO" is always on the move, never cumbers the shelves long, and is a business asset of the highest value for your repeat orders are always warranted.

IT PROFITS EVERYONE.

"KO-TAL-KO" does justice to me, to you and to the public, and every Chemist and Druggist should order a supply.

RETAIL PRICE P.A.T.A. 5/- Size 12/6 ,,

ORDERS AND DETAILS FROM

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TRADE PRICE 48/- per doz. 112/6 ,,

PETROLEUM JELLIES

White, Yellow, Amber and Red.

For Pharmaceutical and General Purposes.

AMERICAN SPIRITS OF TURPENTINE,
OLIVE, CASTOR, COLZA OILS,
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James Arnott & Sons, Ltd.

Newcastle-on-Tyne and Cardiff.

"LESCOL" FLORAL PERFUMES

NOTICE

ON account of shortage of spirit and raw materials, Christmas Perfumes will be very scarce this year; but as we are holding a very fair stock at remunerative prices to our customers, we strongly advise them to send us their requirements at an early date, in order to avoid disappointment. On receipt of postcard, if possible, one of our representatives will call with samples when next in your vicinity, or we will forward you a complete price list.

We also hold good stocks of ESSENTIAL OILS at lowest market prices, & FLORAL OTTOS, FRUIT ESSENCES, CHEMICALS, &c.

LESCOL PERFUMERY CO. Lomond Grove, Camberwell Green, LONDON, S.E. 5.

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HULL.

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P.A.T.A.	Protected Retail Price.	Dozen Net.
*LOSALL'S SALT (well advertised), tins	9d.	6/6
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Losall's Salt sells so well, surely it must pay Pharmacists to stock such a big profit-bearing protected line.

LOSALL'S COMPOUND SULPHUR SOAP.

	Box.	Doz.
A valuable emollient medicated skin soap, especially suitable for use in Eczema. 3 Tablets in a box @ 8d.	2/-	18/-

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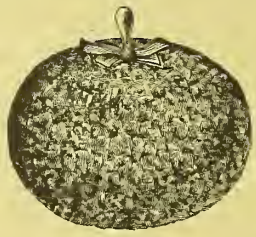

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OF EVERY KIND.

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Wholesale and Export Manufacturers of Druggists' Sundries and Toilet Accessories,

184 to 190 GOSWELL ROAD

LONDON, E.C. 1.

SAVE 3/- PER GALLON

BY BUYING

GUARANTEED GENUINE

NEWFOUNDLAND NON-FREEZING MEDICINAL COD LIVER OIL

OF NEW SEASON'S MAKE.

Highest possible quality in smell, taste and colour, comparing most favourably with the finest Norwegian. Manufactured from the finest fresh Cod Liver on same day as fish caught.

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And of ST. JOHN'S, N.F. Established 1780.

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EXCELSIOR CREPE BANDAGES NAME

Owing to the War, the supply of Crepe Velpeau Bandages is discontinued. We, are, therefore, placing on the market a bandage of ENGLISH manufacture to replace it, which will be sold as

GIMBER'S EXCELSIOR CREPE BANDAGE

TRADE MARK.

An Elastic Bandage. Containing no Indiarubber. Superseding Elastic Stockings, Webs, Bandages, and at half the cost. Three sizes, about 2, 2½, and 3½ inches wide. **Excelsior Crepe Abdominal Binders.**—Useful after many Abdominal Operations, and for ladies after confinements. Two sizes: 8 & 11 in. wide.

CAUTION.—Beware of fraudulent and useless imitations, and reject all Bandages not bearing the above Trade Mark on the Wrappers.

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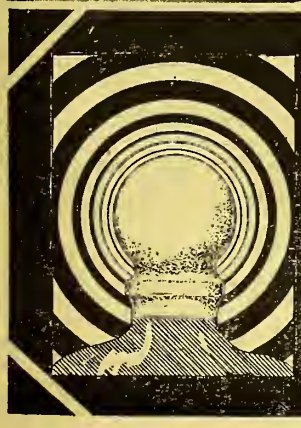
W. GIMBER & SON, Surgical Bandage and Instrument Makers, 44 Queen's Rd., PECKHAM, LONDON, S.E.

And of all Wholesale Druggists, Chemists, Surgical Instrument Makers, &c.

Telephone: New Cross 1601. Descriptive Circular & Price List on application.



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are used exclusively because they add a **SMART SET** to any stopper, cork or sprinkler.

Self-Fitting & Fixing.

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Prompt dispatch can at present be given.

TRANSP. I. R. SOOTHERS

(Ring and Teat). **3**/- doz.

LOOFAHS

2/-, **2**/**6**, **3**/**6**, and **4**/**6** doz.

CORN VELVET

(40 % Sal. Acid). **2**/**8** doz. (3 doz. Cards.)

HYGIENIC TEATS (Trans.)

18/- per gross for gross lots.

HYGIENIC VALVES

12/- per gross for gross lots.

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(3 doz. in carton). **16**/- per gross.

Terms: Net Cash. Carriage paid on 30/- parcels in United Kingdom.

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Contractors to His Majesty's Government.

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MEDICAL PLASTERS

Spread Plasters. Adhesive, Belladonna, Soap Cerate, Roborans, Fleshcolour Adhesive, &c.
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Rubber Adhesive Plaster. On Cotton Cloth or Holland—In Tins or on Spools.

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Waterdressing, Fastedge, Calico, and Flannel Bandages, Elastic Web, Crêpe Velpeau, and Plaster of Paris Bandages.

THE LEICESTER "VARICO" LEG BANDAGE.
TRADE MARK.

LOST!

Recently, between sunrise and sunset, in some Pharmacy—a sale. Answers to the name of "Bacterol." Last seen when we dispatched it by post to some Pharmacist's customer who could not obtain it locally.

Sixpence Reward

should have been the Pharmacist's for handing it over to its anxious owner—in other words 33⅓% profit on cost. It sells at face value, too. Include 3×2/3 Medical Bacterol and 6×2/- General Bacterol in your next order to your wholesaler, and see that a sale is not lost in *your* pharmacy.

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ABSORBENT GAUZE TISSUE,
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WHOLESALE ONLY. Write for Samples and Prices.

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SUPERIOR ENGLISH MANUFACTURE. FAST WOVEN EDGES.

"It's the greatest comfort in the world for every case of Varicose Veins."

Extremely Elastic, but contains no Rubber.

Invaluable for binding. Displaces rubber and elastic web. More durable and one-third the cost The Norwich Crepe Bandages containing wool, will provide warmth, and do not absorb grease readily. Self-clinging and self-adjusting. Perfectly cleansed, sterilised, and resil ency entirely restored by washing in hot soft water (with addition of a little s apl. The edges will not fray out nor ravel. Made and supplied to the leading wholesale houses neatly wrapped in labelled packages. Commended by the medical and nursing professions. Send for prices and samples to the sole manufacturers—

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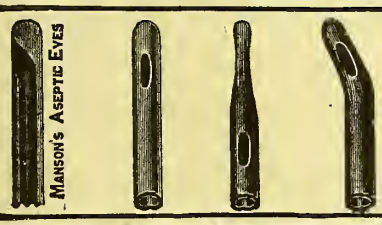
London Buyers can obtain samples & prices from **Mr. T. Eastaway**, London Representative, 7 Wool Exchange, E.C 2



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Celebrated physicians all over the world are now recommending **"J. B. L. CASCADE," AN INTERNAL BATH** for ills of the Stomach and Intestines, and for Headaches and Constipation; the Deadly Appendicitis and Typhoid Fever are prevented by this treatment. Prominent druggists in all countries have it in stock. Supplied by

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Gloves of the most satisfactory improved manufacture, combining greatest toughness with unusual fineness of texture. They give perfect protection with the very minimum interference with the most sensitive touch, enabling operations of the greatest delicacy to be performed as satisfactorily as with the bare hands, completely eliminating risk of infection to operator or patient.

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Best in use, most durable, easy to sterilise. A line of absolutely certain successful trade.

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SOLUBLE QUININE PESSARIES.

THE WORLD-WIDE REPUTATION that these Pessaries have obtained since their invention by W. J. Rendell in 1885 has induced unscrupulous persons to place upon the market worthless and injurious compounds, with colourable imitations of W. J. Rendell's labels. To distinguish the genuine Pessaries from these fraudulent concoctions, see that the Registered Trade Mark and Number, in *RED INK*, are upon each box thus:

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Registered also in Australia, India, The Cape, The Argentine, Germany, &c.

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Several injunctions in the High Court of Justice having already been obtained (reports of which have appeared in "The Chemist and Druggist"), W. J. RENDELL'S SOLICITORS are instructed to take proceedings against all persons (Makers or Vendors) fraudulently using the name of W. J. RENDELL," "RENDELL," or any colourable imitation thereof in connection with Pessaries NOT manufactured by

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FOR COLOURING GREY HAIR
This popular article is largely advertised and stocked by all Wholesale Houses.
Trial Size 8d., per post 10½d.; Medium, 1/4, per post 1/7; Large, 3/6, per post 3/10.
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With Inscriptions in any desired tint; also Plain or Embossed.
"Beautifully made and the inscriptions give them a distinction all their own."—*C. & D.*
"Perfection of Cachets."—*Lancet.*
These Cachets are especially adapted for Headache, Neuralgia and other powders.
COOPER, SON & CO., Ltd., 80 Gloucester Road, SOUTH KENSINGTON.
In 17 Sizes, to fit the various types of Cachet Machines.

Van Horn and Sawtell
—LONDON AND NEW YORK— MAKERS OF
"K-Y" LUBRICATING JELLY
IN COLLAPSIBLE TUBES AND OF
Van Horn **"Sterile Sutures and Ligatures**
IN GLASS TUBES — PRICES ON APPLICATION
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Notwithstanding the shortage of supplies, we are still in a position to supply all orders and guarantee our preparation to be exactly the same as pre-war recipes. Own-named brands a speciality. Largest profit, and most reliable Hair Dye yet produced.
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QUIN-QUENNA Sells merely by showing.
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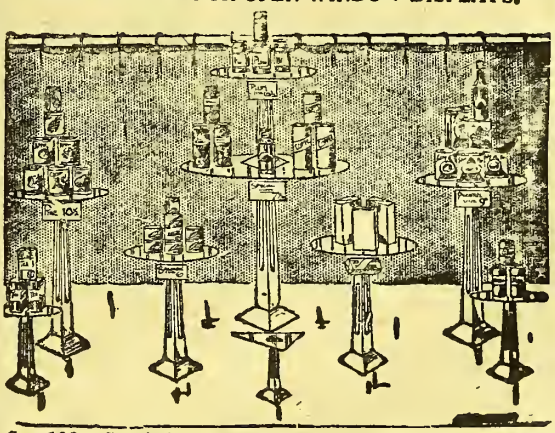

Set 139.—Consisting of 1 27 in., 2 24 in., 3 12 in., 3 9 in. POLISHED OAK PEDESTALS, with 1 24 in. × 18 in., 2 18 in. × 12 in., 2 16 in. × 10 in. OVAL PLATE GLASS SHELVES: 1 12 in. Angle and 3 10 in. Circles.
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We guarantee a perfect edge on ANY blade, ANY make.

Trade terms : 6d. PER DOZEN net.

Blades returned same day as received.

SEND US YOUR WORK.

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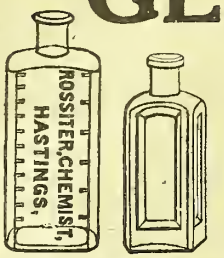

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Poisons. Actinic Green, Blue or Amber.

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85 % UP.

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"GLACIALINE"

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The only Food Preservative that has ever been publicly awarded Gold and Silver Medals and Certificates of Merit for Purity and Harmlessness.

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Packed in 6d. and 2/- Packets and 2/3 Canisters.

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Burroughs Wellcome & Co.'s

Exhibit at the British Scientific Products Exhibition, King's College, Strand

Here are shown some of the Fine Chemicals, Alkaloids, &c., with which Burroughs Wellcome & Co. have replaced products of enemy origin. Long before the war Burroughs Wellcome & Co. had the prescience to prepare for the position which hostilities would create.

Most significant evidence of their anticipatory work in combating enemy activities is afforded by the following facts:—

Burroughs Wellcome & Co. made and offered commercially

Pilocarpine and its salts in 1900

Atropine, Eserine and salts in 1901

Homatropine in 1905

After the outbreak of war they were the first firm to receive a licence to work an enemy patent for medicinal chemicals, and were able to replace German Salvarsan and Neosalvarsan with

'Kharsivan' and 'Neokharsivan'

so quickly that no real inconvenience was caused by the stoppage of supplies.

Such celerity would not have been possible had it not been for their pre-war study of the arylarsonates and their production of 'Soamin,' which, as this exhibit shows, represents a late stage in the synthesis of Salvarsan.

Amongst other products exhibited are :—

Aspirin	Phenacetin	'Kharsivan'	Emetine
Salicylic Acid	Acetanilide (Antifebrin)	'Neokharsivan'	Emetine Bismuthous Iodide
Sodium Salicylate	Sodium Glycerophosphate	'Halazone'	Emetine Hydrochloride
Hexamine (100% purity), replacing Urotropine	Benzamine Salts, replacing B.-Eucaine Salts	'Tolamine' (Chloramine-T.)	'Ernutin' (Synthetic Ergot)
		Adrenalin	

An inspection is invited of Burroughs Wellcome & Co.'s Exhibit in the Drawing Office, Main Corridor, British Scientific Products Exhibition, King's College, Strand, London.

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FLEXOIDS.
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EXTRAITS AUX FLEURS.
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"C. & D. Diary," 1919.—Our annual *Diary*, which will be in the same form as the last issue, has, in consequence of war conditions, to go to press somewhat early, and the work of revision is already in hand. We shall reserve space for the registration of formulas for "known, admitted, and approved" remedies. Our *Diary* was the first book of the kind which the Revenue authorities accepted as an approved book of reference. The space reserved in the 1919 *Diary* for such formulas will be limited, so that true copies of them, with doses or other directions for use, should be sent to the Editor *C. & D.*, 42 Cannon Street, London, E.C., as promptly as possible.

United Arts Rifles, "D" Company (Pharmacists).—On August 18, at 10 a.m., the company will parade at Imperial College Union, South Kensington, S.W.; dress, drill order. On August 21 and 22, platoon parades will take place at headquarters at 3 p.m.

Mr. Francis Pickard, chemist and druggist, 168 Great Clowes Street, Broughton, Salford, who died on June 16, left estate valued at 1,504*l.* 12*s.* 4*d.* gross, with net personalty 1,405*l.* 19*s.* 3*d.*

Mr. James Pearson Riddle, chemist and druggist, 15 Village Terrace, Westoe, South Shields, chemist and druggist, who died on June 9, left estate of the gross value of 1,383*l.* 15*s.* 6*d.*, with net personalty 968*l.* 18*s.* 5*d.*

Sir George Hare Philipson, who died on January 24, left property of the value of 26,235*l.* 2*s.* 2*d.*, the net personalty being 19,686*l.* 2*s.* 3*d.* Among the bequests is one of 2,000*l.* to the University of Durham Medical College, in trust for two scholarships for undergraduates who obtain the highest number of marks in the examination for M.B. To the General Medical Council he left a photogravure of himself.

European War News.

Drugs for the Troops.

From the London Gazette, August 13, 1918.

Whereas by an Order dated the 5th day of June, 1918, the Army Council under the powers conferred upon them by the Defence of the Realm Regulations prohibited the sale or supply of certain drugs to or for any member of His Majesty's Forces except subject to certain conditions. Now the Army Council in pursuance of the said powers and all other powers them thereunto enabling hereby order as follows:

There shall be added to the Schedule of the said Order dated the 5th day of June, 1918, the drugs acetanilidum and phenacetinum and any salts, preparations, derivatives, or admixtures prepared from or with either of the above-mentioned drugs.

By command of the Army Council.
War Office, August 8. *R. H. Brade.*

Radium Control.

The Minister of Munitions on August 13 issued an Order prohibiting the purchase, sale, or delivery of any radio-active substances, luminous bodies, or ores without a permit, and providing that such returns of stocks, etc., shall be made as are from time to time prescribed. The Order applies to all radio-active substances, including actinium, radium, uranium, thorium, and their disintegration products and compounds, luminous bodies in the preparation of which any radio-active substance is used, and ores from which any radio-active substance is obtainable, except uranium nitrate and radio-active substances which at the date of this Order form an integral part of any instrument, including instruments of precision or for time-keeping. Applications in reference to this Order should be addressed to the Controller of Optical Munitions, Ministry of Munitions, 117 Piccadilly, London, W. 1.

Personalia.

Captain E. C. Evans, Canadian Forces, is lying seriously ill at a military hospital in France. Captain Evans is the eldest son of Mr. Alfred B. Evans, Vice-President of the National Drug and Chemical Co. of Canada, and a director of Evans Sons Lescher & Webb, Ltd.

Lance-Corporal F. G. Lickiss, R.E., has been invalided home from France, and is in hospital in England. Lance-Corporal Lickiss, who is a holder of the Belgian Croix de Guerre (*C. & D.*, February 16, p. 34), was till enlistment with Boots, Ltd., at their Chorlton-cum-Hardy branch.

Company Sergeant-Major W. Booth, who is now in Holland, after confinement in Germany as a prisoner of war, was received by Sir George Cave during his mission at The Hague. In a recent letter to his brother, Mr. J. J. Booth (Booth & Co., wholesale druggists, Idle), he remarks: "We have not had any fresh meat for weeks now, and I fear that if the war continues another eighteen months the Netherlands will be in a state of famine."

The "London Gazette" of July 26 contains the following reference to the award of the Military Cross to Lieutenant Duncan Cumming, Lancashire Fusiliers (*C. & D.*, June 1, p. 33): "He formed some stragglers into a force under his command, and organised a defensive flank. Later, although without sleep for four nights, he organised an outpost line under heavy fire, continually inspiring the men by his confidence and cheerfulness." Lieutenant Cumming is the son of Mr. John Cumming, chemist and druggist, Victoria Street, Crewe.

Captain Douglas Farthing, Labour Corps, who has recently been promoted to his present rank, is the son of Mr. G. T. Farthing, chemist and druggist, manager to Mr. J. Paley, pharmacist, Prescot Road, Liverpool, and is twenty-one years of age. Captain Farthing was apprenticed to Mr. W. J. Axe, chemist and druggist, Wavertree Road, Liverpool, and then went as assistant to Mr. George Jarman, Dale Street. He volunteered at the age of eighteen, and somewhat later, after gaining the rank of sergeant in the trenches, was pronounced unfit for front-line service. He then began training in a cadet corps, and has rapidly risen to the rank of captain.

Miscellaneous.

Enemy Patents.—Licences have been granted to the Morton Sundour Fabrics, Ltd., to use eighteen patents belonging to enemy aliens.

Enemy Trader.—The Pharmacie Centrale, Aux Cayes (manager, Dr. Huen), Port au Prince, Hayti, appears in the latest Foreign Office list of firms with whom persons in the United Kingdom are forbidden to trade.

English and Welsh News.

The Editor would be obliged if subscribers would send him marked copies of newspapers containing items of interest for insertion in this or other news sections of the "C. & D."

Birmingham.

The shares of Southall Bros. & Barclay, Ltd., stand at 2*l.* 3*s.*; those of Cadbury Bros., Ltd., at 1*l.* 2*s.* 6*d.*

Mr. Wilfrid Hill has written to the local Press deprecating banking amalgamations, and offering to meet a bankers' representative in public debate.

A firm "with machinery available for making large quantities of coated pills" is sought for in the "Birmingham Post" by an advertiser giving a London address.

Dr. J. H. Brice, for many years a well-known practitioner in the city, and for some years Hon. Treasurer of the Queen's College Medical Society, was buried on August 13. He was fifty-seven years of age.

The Birmingham City Magistrates, Sir Thomas Barclay presiding, unanimously decided in a case heard on August 9 that chewing-gum containing 20 per cent. of sugar is not a sweetmeat within the meaning of the Order issued by the Ministry of Food.

Pharmacists here did not do a roaring trade on the Tuesday following Bank Holiday, nor on the Wednesday morning. On Wednesday afternoon they closed. The suggestion is being made that the next public holiday might as well be extended to three days.

The Birmingham Branch of the Association of Women Pharmacists held its annual meeting on August 8. Councillor Eldred Hallas presided, and an address was delivered by Miss Buchanan, Ph.C. The speaker said the importance of accurate and economical dispensing was not sufficiently realised by the Committees of public institutions; and the public at large were not sufficiently aware of the extent to which their very lives were in the hands of the dispensers of their medicines. The only safeguard consisted in dispensers being required to have passed all their examinations, and to have gained experience under qualified oversight. The meeting passed a resolution protesting against the appointments of unregistered dispensers by various local institutions, and demanding that only fully qualified chemists and druggists should be employed by public institutions as dispensers.

Liverpool.

Mr. William P. Evans is in London this week, and has visited his son, Lieutenant Ernest Sandford Evans, at the London Hospital. (See *C. & D.*, August 10, p. 33.)

Thanks to the Summer Time Act and the earlier closing, chemists and their remaining assistants can take some advantage, during the hot spell, of the Mersey ferry-boats between the city and New Brighton.

Eric Gordon Mawson, research chemist, pleaded guilty at Birkenhead, on August 12, to having failed to present himself for service with the Army when called up, his excuse being that he was a conscientious objector. He was fined 40*s.*, and was handed over to the military.

The pharmacist of to-day cannot gauge his customers as of yore. Enter a working-man of humble mien, who asks for a pair of nail-scissors (carved). The pharmacist shows a pair and diffidently names the current price, 5*s.* 6*d.* "That's all right," replies the man as he tenders one of a sheaf of Treasury notes.

Sheffield.

The city has been in a holiday mood during the week, and many chemists have worked in a few days' rest. A regular holiday is a thing of the past!

All the pharmacists coming under the new military age who have been agreed upon as indispensable by the Joint Committee should receive within the next few days a certificate of exemption from service and Volunteer duties. If this does not come to hand, they should get into communication with the Secretary to the Pharmaceutical Committee.

Miscellaneous.

Hastings Bowling Tournament.—Pharmacy will be represented at this tournament, which begins on August 26, in the singles, pairs, and rinks. In the last-named there is still room, and any chemist who can be present is invited to communicate with Mr. G. Duncan Bowie, the Progressive Pharmacy Club, Arundel Hotel, Victoria Embankment, London, W.C. 2.

Bee-disease.—The Board of Agriculture and Fisheries have appointed a Committee to study the life habits of the honey bee with the object of improving the conditions under which bee-keeping is carried on in England and Wales, and to investigate the epidemic diseases of the bee, more especially the disease or group of diseases which pass under the name of "Isle of Wight" disease. Communications on this subject should be addressed to Mr. A. G. L. Rogers, 4 Whitehall Place, London, S.W. 1.

Sale of Food and Drugs Acts.—At Hull Police Court on August 9, Mr. Edward Ryley, chemist and druggist, Lowgate, was summoned for selling zinc ointment deficient in zinc oxide. Mr. Ryley did not dispute the city analyst's report, which showed that only 7.5 per cent. of zinc oxide was found in the sample purchased. He explained that while making the ointment he was called away by a customer, and on his return found that it had set. Judgment was respited on payment of costs.

In the Courts.—At Silloth Police Court, recently, Mr. Anthony Nichol, Ph.C., Carlisle, was summoned for erecting a wooden bungalow which did not comply with the by-laws of the Holme Cultram District Council. For the defence it was urged that the by-law did not apply to this case, which was that of an old building removed to another site, and that the Council had previously permitted infringements of its by-laws, which dated from 1889 and were not reasonable. Further, the Council itself had supplied gas to the building. Mr. Nichol, who was not present, was fined 2*l.*, and costs, with a penalty of 10*s.* a day after the expiration of twenty-eight days—to continue, unless the building is removed, until February 14, 1919.—At Guildhall Police Court, London, on August 10, S. H. Whybrow (14), warehouse assistant, and N. L. Clifford (15), messenger, were remanded for a week on a charge of being concerned in stealing a post-bag containing postal orders and Treasury notes of a total value of 21*l.* 13*s.* 9*d.* Evidence was given that on July 29 Whybrow was sent by his employers, the D.D.D. Co., Ltd., patent-medicine proprietors, Wine Office Court, E.C., to fetch their mails from the General Post Office. He did not return, and it was stated that the two lads took the bag to Epping Forest, sorted its contents, made bonfires of the letters, and went to Southend. Some of the notes were recovered.—At Ilminster, recently, Walter Slade, errand-boy, was bound over and put on probation for six months for stealing three tablets of soap from his employer, Mr. Harold J. Parsons, chemist and druggist. Mr. Parsons stated in evidence that this was the third lad who had stolen goods from his shop, and that on going to interview the boy's mother he was met with a torrent of abuse.—On being summoned for rates at Newport (Mon.) Police Court on August 14, Mr. Alfred W. Lewis, chemist and druggist, protested that the town suffered through the under-assessment of its Mayor. Payment was ordered.

Irish News.

Brevities.

Mr. Roden Johnston, Ph.C., Downpatrick, has been confined to bed for about a month, owing to a fractured leg. He is, however, progressing favourably.

Attention is directed to an advertisement in the Coloured Supplement for a Professor of Practical Chemistry in the School of the Pharmaceutical Society of Ireland.

The Local Government Board has sanctioned an increase of salary from 70*l.* to 85*l.* a year to Mr. W. C. Harvey, Ph.C., compounder of medicines, Clonmel Dispensary. The proposal of the Guardians was a graded scale of salary rising to 100*l.*

The Local Government Board has issued a circular to Boards of Guardians intimating that under the provisions of the Finance Act, 1918, contractors for medicine are entitled during the currency of the present contract to charge extra for drugs, a list of which is enclosed.

Owing to the severity of the influenza epidemic in Derry the compounder to the Board of Guardians has applied for special leave of absence, intimating that for the two weeks ended July 13, when the epidemic was at its height, he compounded and dispensed 1,653 items at the dispensary. The extra leave was granted.

In connection with the new Irish recruiting scheme Major W. A. Montgomery, D.S.O., announced at a recruiting meeting in Ballymena last week that he intended to apply for the appointment of Lieutenant H. M. Lancashire, who had been wounded, as recruiting officer for the district. Lieutenant Lancashire is a son of Mr. H. W. Lancashire, J.P., Ph.C., and Chairman of the Urban Council.

Castor Oil has been found a satisfactory lubricant for aeroplane-engines, because it is almost the only oil that is not soluble in petrol.

Scottish News.

Brevities.

A chemist's business has been opened at Rosyth.

Many people are buying perfumes, etc., before a luxury-tax increases the prices.

Valentine's meat juice and Cuticura are frequently asked for, yet seldom to be obtained.

From November 1 cases of ophthalmia neonatorum in Scotland must be notified to the medical officer.

Generally speaking, customers have been taught by war conditions to be more courteous. The penny or twopenny difference at So-and-So's is now seldom paraded, for people have got to know that it pays to become a regular customer rather than a butterfly.

Leslie bowlers had a field-day on August 7, when a silver challenge cup, presented to them in 1909 by John Haig & Co., distillers, Markinch, for competition, was won by Mr. John Carmichael, chemist and druggist, with the excellent score of 40. As this is the third time Mr. Carmichael has been the winner, the cup, according to the conditions, becomes his absolute property.

Dundee.

The name of Miss Isabel Winton Gray, daughter of Mr. John Gray, chemist and druggist (Davidson & Gray, chemists, Nethergate), appears four times in the recent prize-list of the Royal Academy of Music. Miss Gray has won the Alexander Roller Prize as the best pianist during the academic year, and in addition has been awarded three medals—one for harmony, one for pianoforte, and one for sight-singing.

Edinburgh.

A dairy is offering saccharin tablets at two a penny.

One or two brands of infants' food are unobtainable locally.

The police give warning that counterfeit notes are still being discovered.

It is said that two pharmacies will be closed from September 1 unless managers can be obtained for them.

Several chemists are now compiling "waiting lists" of customers for photographic films and saccharin tablets.

The rumour persists that somebody, presumably on behalf of somebody else, is out after every pharmaceutical business for sale.

After the war the astute advertiser will hint that certain goods are about to go up in price—if he wishes to clear out a stock. The latest commodities to be sought for eagerly are photographic plates, which, in spite of the scarcity of films, have been comparatively friendless for a long time.

At a recent meeting of the Edinburgh Tribunal, Dr. J. L. Ewing (Duncan, Flockhart & Co.) presiding, the N.S.R., Colonel Mackay, who is a son of the late Mr. John Mackay, Ph.C., raised the question whether a man earning only 180*l.* a year could be classed as an official. He held that the man in question was a clerk, and might be a very important clerk, but that he was not entitled to exemption as an official. Two months' final exemption was granted.

"Recent comments upon the soul-and-conscience ways of certain medical practitioners," writes a correspondent, "remind me of a genial old cynic I served years ago. One of the chief patrons of the establishment was a very 'grippy' local doctor—now sleeping with his fathers—and the boss, pretending to excuse the medico's chronic bargaining, used to relate emotionally that this was the physician who called in the Glasgow specialist and paid the bill himself rather than ruin the poor ploughman. Once or twice visitors took a note of the tale, I remember!"

Business Changes.

The City Address of Leslies, Ltd., is now 62 London Wall, E.C. 2.

Mr. F. J. Denham, Ph.C., of Norton & Co., chemists, Cairo, Egypt, has opened a drug-store in Jerusalem.

Mr. John Braddock, chemist and druggist, has taken over the business of Mr. J. Richardson, Station Road, Hadfield.

Mr. Alfred Thomas, chemist and druggist, has acquired the business recently carried on by the widow of the late Mr. S. Vernon Saunders, 57 Old Town, Clapham, London, S.W. 11.

The Irish Final Examination.

After four months' genuine study I felt ready to present myself for this much-discussed examination. Many rejects whom I met from time to time told me of the "barbed-wire entanglements" which surround the L.P.S.I. diploma, and in justice to the examiners I should like to relate my experience. Arriving at Mount Street on the first morning, I was directed to the examination-hall. The first paper, on pharmacy, was handed round at 11 A.M.—it embodied the B.P. in miniature—a series of eight questions, each in turn subdivided and intended to discover the candidate's weak points and his good ones. Included was a prescription to comment upon—a good idea, for it eliminates the theory man forthwith. Two hours was allowed, and I had fifteen minutes to spare.

After dinner I resumed; this time it was materia medica and botany. This paper was also a searching document, but equally as fair as the pharmacy paper. This I got through within the allotted time. The chemistry paper, an hour later, was easy, but it was a cleverly set paper, inasmuch as two candidates could answer all questions to their own satisfaction as regards a pass, but the examiner would have little difficulty in estimating the hall-mark the candidate bore.

That night I wondered what the practical side of the exam. was like. I had realised that mere theory work is rewarded as such, and that I should have to live up to it in actual practical examination. Next morning I was called for practical chemistry. I detected my salt in a few minutes, and shortly after the B.P. substance; the volumetric, to establish the strength of a given solution of arsenic by means of permanganate, I also negotiated without difficulty. After writing a description of my work I had thirty-five minutes to spare—the time allowed was one and a-half hours. I returned for practical pharmacy that afternoon. The paper consisted of four prescriptions—thymol pills, 1½ gr. in each—2 pills t.i.d.—an evident overdose; also a mixture containing an overdose of tinct. cannabis indic. with spt. chlor., tinct. zingib., and mist. amygd.; a nasal wash; and an ointment. The directions in the three latter were long and catchy. I finished well inside the time allowed, and was complimented on my pills.

Next morning I turned up for the oral examinations. Chemistry first (Mr. McBirney). Was told I did a nice paper and did well in practical chemistry (45 out of 50). Was asked how to make chlorine. Gave Deacon's process. Any other way? Gave the method with manganese dioxide and sulphuric acid. Asked to write formula; also to describe the gas and how to test it. Give B.P. method of making hydrogen peroxide; what I considered faulty with resulting product; could I suggest a better way; also give the B.P. test and write formula. Method of synthesising anilin; action of mercuric chloride on it, also result when treated with hydrochloric acid. Then I moved to Dr. Ashe for materia medica and botany. He took me over at least ten natural orders, and coming to lobelia, asked me for likely impurities. Asked specific gravity of castor oil and B.P. test; sp. gr. of ol. caryoph.; any other oils that sink in water, with dose; also test to differentiate between mucil. tragac. and mucil. acaciæ. Coming to botany, I was given in quick succession *Ranunculaceæ, Papaveraceæ, Solanaceæ, Euphorbiaceæ*, and asked the N.O. of cherry-laurel leaf and strength and dose of aq. laurocerasi. I was shown also a small flower which I did not classify. Then I went for the subjects of the British Pharmacopœia, prescription-reading, and recognition of galenicals (Mr. Burnett and Mr. Warrick). Was given liq. arsenicalis, tinct. card. co., aq. laurocerasi, and liq. calcis sacch. to recognise. Also tinct. hyoscy., tinct. valer. ammon., pulv. ipecac. co., pulv. jalap. co., pulv. cretæ aromat., and had also to give the ingredients entering into each of these preparations and the B.P. method of making them. How is ext. hyos. sicc. made, strength, and dose. I was shown a percolator and asked to explain its use. Next came prescription-reading, some of these being "rare ones," others with very evident overdoses. I was given time and every chance. Then was examined about the poison regulations and the Cocaine and Opium Regulation.

This concluded the three days' examination, and next morning saw my name on the list with a feeling of much satisfaction, particularly as it was my first attempt.

Easton. (81/9.)

Indian Quinine.—The profitable nature of the quinine-industry at the present time is to be seen in the Madras Budget. The revenue in 1914-15 was five lakhs of rupees. This has gone on rising, and the estimate for the current year is more than nine lakhs.

Legal Report.

Apprenticeship Contract.—At the Sheffield County Court, before his Honour Judge Denman Benson, Mr. Samuel Paddon, chemist, 657 Attercliffe Road, Sheffield, brought a claim against Walter Fowler Crapper for breach of contract in the matter of his daughter's (Christabel) indentures as an apprentice to the plaintiff, and for damages amounting to 50*l.* alleged to have been sustained owing to loss of her services. An injunction was also sought to restrain the defendant's daughter from working elsewhere. Mr. J. E. Wing appeared for the plaintiff, and Mr. A. Neal for the defendant. The defendant admitted that his daughter left the plaintiff's service. He contended that she was not receiving such supervision from the plaintiff as would ultimately result in her becoming a qualified chemist. His chief complaint, however, was that the girl was frequently kept after 8 P.M., and he feared that from cases he had seen in the paper he might be proceeded against under the Shops Act. Mr. Neal contended that the agreement was not an indenture in proper form. Mr. Wing argued that if Mr. Neal wished to have the indenture set aside he must make a special application, and could not effect this on this application. His Honour, in a reserved judgment delivered on August 9, decided that they could not enforce a negative covenant that the daughter was not to work for another employer until January 1, 1920; the claim for damages against the daughter, and also the claim for injunction, must go. It was suggested the male defendant was no party to the agreement, and that he did not incur all the obligations the girl did. He did not think this was a true construction of the agreement. He considered the plaintiff had suffered damages for the two and a-half years he had been teaching the daughter. She was able to dispense, and did so in his absence. She might even sell poisons, but there had been no appreciable increase in the number of Coroner's inquests so far as he knew. He assessed the damages at 15*l.*, with costs, and directed the apprenticeship contract to be rescinded. The defendant, who is a mechanic, was ordered to make the payment at the rate of 1*l.* a month.

New Companies
and Company News.

P.C. means Private Company and R.O. Registered Office.

Rycroft Chemical Co., Ltd. (P.C.).—Capital 5,000*l.* Objects: To carry on aniline dye and chemical manufactures in all its branches, etc. The first directors are A. Rycroft, 32 Brazennose Street, Manchester, and G. Marynissen, 22 Booth Street, Manchester.

British Kaolin, Ltd. (P.C.).—Capital 10,000*l.* Objects: To purchase or otherwise acquire any interest in any patents, benefits, and inventions relating to the mixture and use of waste products, magnesia, china clay, and other earths and minerals, etc. R.O., 36-38 Victoria Street, London, S.W.

London Surgical and Optical Makers and Engineering Co., Ltd. (P.C.).—Capital 15,000*l.* Objects: To acquire the business now carried on at Balham as "London Surgical and Optical Instrument Makers and Engineering Co.," to manufacture lens grinding and surfacing tools and machinery, surgical and optical instruments, etc. R.O., 2 Fenchurch Avenue, London, E.C.

Electro Bleach and By-products, Ltd.—The directors have declared an interim dividend in respect of the current year of 3½ per cent. (less tax at 5*s.* 6*d.* in the pound) on the preference shares.

Liebig's Extract of Meat Co., Ltd.—The report for the year to March 31 states that balance at profit and loss is 566,772*l.* The directors propose to pay a final dividend on the ordinary shares of 10 per cent. (10*s.* per share), making 20 per cent. for the year (free of tax), also a bonus of 5*s* per share (free of tax) on the ordinary shares.

The India Culture and Developments Works Co., Ltd., has been formed in Bombay, with a capital of Rs. 25,000,000. The company has been permitted by the Government of India to issue its share capital up to 10 lakhs, as the undertakings are considered to be of great national importance, the company having obtained concessions from the Indo-Portuguese Government to use 50,000 acres of forest land for the purpose of manufacturing wood alcohol and other by-products.

Association Affairs.

Newport (Mon.).—The monthly meeting of the Newport Pharmacists' Association was held on July 27, Mr. Benson Harries (President) in the chair. Mr. J. Menhinick gave a report of the meeting of the Pharmaceutical Committee with the Insurance Sub-Committee; the agreement reached was considered satisfactory. Mr. Latimer Davis, on relinquishing the Secretaryship through ill-health, was accorded a hearty vote of thanks for past services. Mr. J. Menhinick was unanimously appointed as his successor. The pamphlet by the Editor of the *C. & D.* on the statutory restrictions on the sale of poisons was favourably commented on, and the Secretary was instructed to procure copies. A proposal to make two pennyworth the minimum quantity in any sale of poisons was agreed to.

Non-proprietor Pharmacists.—At a meeting of non-proprietor pharmacists held at the Progressive Pharmacy Club on August 2, it was resolved to form a trade union on independent lines for the purpose of working in conjunction with skilled drug and chemical workers in their respective sections. A Committee was set up for the purpose of conserving the interests of pharmacists now serving in the Army and Navy on demobilisation, to establish representation on Trade Boards under the Whitley Report, and to carry through the principle of a minimum wage, together with the usual trade-union benefits. A guarantee fund was forthcoming, and immediate action was decided on. Mr. E. N. Lloyd, 51 Earlham Grove, Forest Gate, London, E. 7, was appointed Secretary *pro tem.*

Oxford.—A meeting of the Oxford and District Chemists' Association was held on July 24, Mr. John Dolbear (President) in the chair. The Secretary (Mr. H. C. Goodall) read a letter from Mr. S. H. Clegg, one of the members, describing his work as sanitary corporal and dispenser on board a transport. Reports from the Central Checking Bureau were read, and were considered satisfactory. The work of the Military Service Sub-Committee was reported and approved. Reference was also made to the considerate attention by the National Service Representative to the claims set out by the City and County Pharmaceutical Committees. The report of the Committee on Organisation was read by the President, and it was resolved that the Pharmaceutical Society be asked to furnish sufficient copies for all the members in order that it may be fully discussed at the next meeting in October. On the proposition of Alderman C. Clayton, seconded by Mr. H. O. Oddy, the Secretary was asked to accept the sum of ten guineas as an honorarium for valuable services rendered to the Association. Mr. Goodall, in accepting, suitably thanked the members for their kind gift and remarks.

Military Tribunals' Decisions.

Since our Last Report the following decisions have been notified:

Epping.—Mr. E. H. Slater, chemist and druggist, was conditionally exempted for six months.

Hastings.—On review, conditional exemption was withdrawn from Mr. W. H. Festing, druggists' sundriesman, who was allowed grace till October 16.

Penzance.—Mr. S. Carter, chemist and druggist, was conditionally exempted.

Ryde.—Exemption to November 1 was substituted for the conditional exemption held by Mr. S. D. McQueen, chemist and druggist, manager to Timothy White Co., Ltd.

Sheffield.—Mr. Turner (G. T. W. Newsholme, Ltd.) was temporarily exempted to December 31.

Weston-super-Mare.—On appeal, the case of Mr. H. W. Vanes, chemist and druggist, was adjourned *sine die.*

A Saturated Solution of mag. sulph. is being recommended as an application for burns.

Neo-salvarsan.—The United States Government recently seized 1,247 vials of neo-salvarsan, imported from Germany *viâ* Holland, the goods being discovered in a false-bottom trunk. They were to have been offered by public auction, and were expected to realise $25,000, but when the proceedings were about to commence Herman A. Metz (a naturalised American subject), president of the Farbwerke Hoechst Co., served an injunction on the auctioneer forbidding the sale until argument could be heard on the contention of Mr. Metz that no one could sell neo-salvarsan in the United States but himself, and that not even the Government had the right to sell neo-salvarsan.

British Scientific Products Exhibition.

The exhibition of British Scientific Products organised by the British Science Guild was opened for inspection at King's College, London, on August 12, when Professor R. A. Gregory (Chairman of the Executive Organising Committee) delivered an address on the aims and objects of the exhibition, in the course of which he said that the idea is to stimulate public interest and confidence in the capacity of British science, combined with industrial enterprise, to secure and maintain a leading place among progressive nations, and the object is the full development of our mental and material resources. "It has been popularly assumed," said Professor Gregory, "that original scientific work was almost a prerogative of Germany, whereas a slight acquaintance with scientific history would show that most modern industries have originated with British science and invention. In purely scientific research of initiative quality we have been the pioneers; where we have been deficient is in the practical use of the results obtained and the application of our natural scientific genius to the solution of industrial problems." Under the stress of war, and protected from the dumping methods which strangled promising industries almost at their birth, the opportunity has arisen of proving the latent capacities of many of our scientific industries. Professor Gregory mentioned the work done by Sir Herbert Jackson, professor of chemistry at King's College, to provide the chemical glass and optical glass urgently needed when supplies from Germany and Austria were cut off. Working with a Committee of the Institute of Chemistry, Sir Herbert Jackson determined the composition of numerous glasses required, and placed the formulas freely at the disposal of manufacturers. The result was a reawakening of the glass-industry in this country; and a position has now been secured which is strong enough to enable our manufacturers to meet all assaults upon it. The pure potash required for certain glasses is now obtained by a new electrolytic process; and we need never again go to Germany for it or for the glass itself. Our chemical-manufacturers, he added, are meeting all demands for such synthetic organic drugs as salicylic acid and aspirin, phenacetin, salvarsan, and many others, photographic chemicals, synthetic dyes and associated products, as well as hundreds of similar substances of which Germany had the monopoly. The magneto-industry has established itself in a sound position, and the German instrument has been displaced for good. Hard porcelain for electrical fittings and laboratory ware is now British-made, thanks to scientific work and industrial enterprise. We produce all the tungsten required for special steels and metallic filament lamps, and can supply the world if necessary; we make aluminium alloys superior to any of the German pre-war products, and like success has been attained in other directions.

The Exhibits.

More than 250 of the leading British manufacturers have sent exhibits, and it will be well understood that the number could have been materially increased had not the successful prosecution of the war claimed first attention. In spite of this, however, it has been possible to bring together an impressive collection of products and appliances of scientific and industrial interest which, prior to the war, were obtained chiefly from enemy countries, but are now produced in the United Kingdom. We confine our notes to those of chemical- and drug-trade interest, dealing with them in alphabetical order.

Stafford Allen & Sons, Ltd., have a neat stand of their leading English essential oils and English-grown herbs (including belladonna and digitalis leaves) from their farms. The oils include almond, lavender, peppermint, dill, chamomile, sandalwood, vetivert, patchouli, concrete orris, and bitter almond, all of the company's own distillation. There is also a particularly fine sample of thymol in large white crystals.

Surgical instruments and appliances are well represented in the display of Allen & Hanburys, Ltd., a leading feature of which is their cystoscopes, constructed on an improved principle.

Mr. P. P. Baker has a display of camel-hair brushes, the entire manufacture of which is now carried out in this country.

A. Boake, Roberts & Co., Ltd., exhibit chemicals used in pharmacy, such as salicylic acid, chemicals used in sugar-refining, and chemicals used in aeroplane "dopes."

Boots Pure Drug Co., Ltd., have an exhibit of medicinal chemicals, among the principal being acriflavine, acetanilide, aspirin, atropine, butylchloral hydrate, cantharidin, chloramine-T, dichloramine-T, digitalin, hexamine, phenetidin, phenacetin, saccharin and its intermediate products, salicylic acid, sodium glycerophosphate, and theobromine.

Bradford Wool Extracting Co., Ltd., show among fine chemicals, phenacetin and the various stages of its manufacture, salicylic acid and derivatives, acetanilide, and technical chemicals for dyeware-manufacture, etc.

British Cellulose and Chemical Manufacturing Co., Ltd., exhibit a number of valuable war products, the chief being cellulose acetate, methyl acetate, acetic anhydride, triacetin, aeroplane dope and varnish, camphor substitutes, and other chemicals.

British Cyanides Co., Ltd., have an exhibit of chemicals made from potash raw material produced in this country, including pure carbonate and bicarbonate of potassium, ferrocyanide and ferricyanide of potassium, permanganate and manganate of potassium, and the pure chloride.

The British Drug Houses, Ltd., have a striking show of fine chemicals, microscope reagents, dyes, etc., all illustrating our emancipation from Teutonic servitude. Among them are resorcinyl monacetate, acetamin, iodatol, menthyl valerate, and bismuth beta-naphtholate, each of which replaces a German product. Several examples of reagents of high purity, distinguished as "A. R.," are also shown, together with such technical chemicals as thiocarbamide and dextrose. One case is devoted to intramine.

British Pharmacy Oils, Ltd., show the various stages of manufacture of paraffin. liquidum and lanolin. Guaiacol carbonate and potassium permanganate are also made by this company.

British Resorcin Manufacturing Co., Ltd., show B.P. resorcin made at their works, and are probably the only company manufacturing the pure product in this country.

Brotherton & Co., Ltd., exhibit ammonia and tar products, claiming to be the only British firm who start with coal-tar and complete the chain of finished dyes in their own factories.

Brunner, Mond & Co., Ltd., devote their exhibit chiefly to chemicals for explosives, including synthetic phenol, T.N.T., and ammonium nitrate, the last-named produced in four different ways.

The dominant note of Burroughs Wellcome & Co.'s exhibit is struck by the series of specimens showing the synthesis of kharsivan and neokharsivan, the first British products to take the place of German salvarsan and neosalvarsan. We may note such exhibits as benzamine salts (replacing beta-eucaine), sodium salicylate, salicylic acid and similar products, and hexamine of 100 per cent. purity, replacing the cruder German urotropine. As examples of the results of their own original researches Burroughs Wellcome & Co. show ernutin, which represents the active therapeutic constituents of ergot; emetine bismuthous iodide; infundin, a pituitary product; lodal, an oxidation product of laudanosine; and nizin, a zinc salt of sulphanilic acid. A striking section of the display is devoted to the preparation and testing of serums and vaccines, some of which are used in the Army. The classical researches on ipecacuanha carried out at the Wellcome Chemical Research Laboratories are illustrated by an exhibit of the alkaloids of ipecacuanha and their derivatives. Among other displays are the various products obtained during the synthesis of cotarnine and histidine. Another type of investigation is indicated by the presence of scale preparations of complex salts of metallic elements. Specimens of Egyptian henbane and other drugs valued for their alkaloidal content are additional features of a fine display.

Castner-Kellner Alkali Co., Ltd., mostly show intermediate dye-products like monochloracetic acid, phenylglycin, orthonitroparachloraniline, etc. Sodium permanganate, sulphur chloride, tin tetrachloride, compressed hydrogen, and liquid chlorine are also shown.

Chance & Hunt, Ltd., have a full range of the ammonium salts, including carbonate and bicarbonate, muriate, and sal ammoniac.

Chemical Research Laboratory, University of St. Andrews, submit twenty-five fine chemicals previously obtained from enemy sources, most of which are now prepared on a manufacturing scale by processes developed in the laboratory since the war. Among the synthetic drugs shown are "Novocain" and "Orthoform neu," together with various intermediates and reagents. As a result of other researches conducted on behalf of the Government, methods have been developed for the recovery of acetone and acetaldehyde from methyl acetone and for the preparation of methyl acetate. At the outbreak of war the laboratory staff undertook the preparation of the bacteriological sugars required by the Government, and this work was continued until the factories were in a position to manufacture. Specimens of dulcitol, mannitol, glucose, galactose, fructose, maltose, and inulin prepared in this way are now exhibited.

Cold Chemical Co. exhibit luminescent chemicals, which are very necessary in carrying on the war.

Sir William Crookes, O.M., F.R.S., shows the oxide of scandium, one of the rarest and least known of the recognised elements, which is used in the preparation of eye-preserving spectacles, which have proved of great value to the troops and airmen.

Joseph Crosfield & Sons, Ltd., have a display of glycerin in various states of purity and of other chemicals incidental to soap-manufacture.

Evans, Gadd & Co., Ltd., show lysol (Gadd), the product being the result of experimental work in the company's laboratories.

Evans Sons Lescher & Webb, Ltd., have an instructive display of a few leading fine chemicals which were formerly imported from Germany, but which are now made by the company. These include atropine and hyoscyamine, bismuth tribromophenol, cantharidin, chlorophyll, hexamine, podophyllin, phenacetin, thymol, etc. Salvarsan and its intermediate products, lanolin, lysol (Evansol), and sandalwood oil are also shown. There is also a special display of organo-therapeutic products prepared at the company's research laboratories, Higher Runcorn, Cheshire.

The Gas Light and Coke Co., Ltd., show coal-tar products and derivatives, the latter including commercial and sublimed betanaphthol, salicylic acid, aspirin, and phenacetin.

Mr. F. Harrison Glew's exhibit consists of apparatus demonstrating radio-activity and its applications, and is well worth a visit.

R. Graesser, Ltd., exhibit synthetic phenol manufactured from benzol; salicylic acid, acrosyl (lysol substitute); also pure phenol, ortho-cresol, cresylic acid, allantoin, etc.

Mrs. Grieve, F.R.H.S., has an enclosed exhibit of British medicinal herbs, including *Atropa Belladonna* and other solanaceous plants, showing roots, flowers, fruits, and seeds pertaining to each, also the same dried as required for pharmaceutical use. The exhibit also includes aconite, chamomile, colchicum, male fern, hemlock, foxglove, orris, dandelion, valerian, etc. Mrs. Grieve is in personal attendance at her stall daily, and invites inquirers to consult her on any point in connection with British herb-culture.

The variety of glassware on view is very great, and affords evidence of rapid progress. In addition to familiar names like those of James J. Hicks, there are represented the British Laboratory Ware Association, Ltd., the British Chemical Ware Manufacturers' Association, Ltd., the British Flint Glass Manufacturers' Association, and other manufacturers of recent fame.

Charles Hearson & Co., Ltd., have a well-arranged display of sterilisers, drying-ovens, balances, Wassermann water-baths, and other adjuncts of bacteriological work. Their shaking-machines for bottles of all sizes are ingenious labour-savers.

Hedley & Co. (Leytonstone), Ltd., specialise in ethyl chloride, ethyl bromide, and other methyl and ethyl ethers. Prior to the war many hundreds of tons were manufactured in Germany every year, and largely used in the manufacture of pharmaceutical products and intermediates for dyes.

Hyposol, Ltd., show the Hyposol ampoule syringe, the all-glass hypodermic syringe, atomisers, sprayers, douche-nozzles, etc.

Photographic enterprise is well marked in the display made by Ilford, Ltd., who show colour-filters, dyes for colour sensitising, and other interesting features of present-day work. It is interesting to observe that the company have beaten Germany thoroughly in the newly discovered sensitising dyes.

Johnson & Sons (Manufacturing Chemists), Ltd., have a comprehensive exhibit of photographic chemicals, such as amidol, metol, glycin, and pyrogallic acid.

Johnson, Matthey & Co., Ltd., have an exhibit of the metals and various salts of gold, silver, platinum and metals of the platinum group (iridium, palladium, rhodium, osmium, and ruthenium), bismuth, copper, selenium, tellurium, thorium, etc., showing the connection of the company in the past with these metals and later developments directly and indirectly due to the war. The exhibit is illustrative of the firm's efforts since the commencement of the war (1) to develop trade previously done by them: (2) to re-introduce trade done in the past, but abandoned as uneconomical in consequence of German competition; and (3) to show new manufactures undertaken by the firm as a direct result of the war.

Thomas Kerfoot & Co. have specimens of a series of organic compounds, the manufacture of which this enterprising firm has undertaken since 1914; the rarer sugars, etc., in a specially pure condition for bacteriological use are also on view.

Levinstein, Ltd., show bottle samples of a large number of coal-tar intermediate products and dyestuffs now being manufactured, together with dyed and printed specimens illustrating the application of these dyes to textiles. Of particular interest are indigo LL and other vat colours, the manufacture of which prior to the war had not been attempted in this country.

Thomas Morson & Son, Ltd., have a display of such chemicals as phenylhydrazine hydrochloride and chromic acid.

The Nitrogen Products and Carbide Co., Ltd., have an interesting group of chemicals associated with the catalytic process, in which ammonia is oxidised with air.

Pierson, Morrell & Co., Ltd., show phenacetin, aspirin, and other fine chemicals manufactured in their recently equipped Barnet factory.

The United Alkali Co., Ltd., confine their exhibit to coal-tar intermediates and derivatives.

Venesta, Ltd., show tinfoil made in a great variety of designs and colours. Formerly tinfoil was largely manufactured in Germany and shipped to all parts of the world, but this has now been supplanted by the Venesta, who are also makers of collapsible tubes made from pure tin and tin-coated lead.

It is understood that the exhibits of a few firms whose names appear in the list have not materialised owing to the pressure of war work. Included in the catalogue is a series of articles contributed by experts on recent technical developments, drugs and fine chemicals being dealt with by Mr. C. A. Hill, B.Sc., Ph.C. (The British Drug Houses, Ltd. Mr. Hill has compressed into a few pages an authoritative survey of the present position in drugs and chemicals. In his concluding sentence he deals with the outlook as follows:

"If the fine-chemical industry is to be developed in this country on a scale anything like commensurate with its importance (and it must be borne in mind that it is a key industry, and therefore of paramount importance to the general development of national industry), Government assistance at the conclusion of hostilities will for a time be absolutely essential."

Other articles are: "The Recovery of 'Key' Industries," by Professor R. A. Gregory; "Chemical Products and Processes," by Sir William A. Tilden, F.R.S. (a Bell Scholar in 1861); "Intermediate Products and Dyes," by Dr. J. C. Cain; "The Rarer Elements," by Mr. James H. Gardiner; "Optical Instruments," by Mr. S. D. Chalmers; "Photography," by Mr. H. C. Jones, F.I.C.; "Radiography," by Dr. Robert Knox; and a "Note" on industrial research associations.

An attractive feature of the exhibition, which will remain open till September 7, will be short lectures and addresses at frequent intervals. One, which is being delivered as we go to press, is by Mr. R. R. Bennett, B.Sc., Ph.C., on "Progress in Pharmaceutical Products."

Insurance Act Dispensing.

A Record of matters concerning Chemists' interests in the National Health Insurance Acts.

Reports from Local Centres.

ENGLAND.

Derbyshire.—At a meeting of the Derbyshire Pharmaceutical Committee held on July 31, the following appointments were made: *Chairman*, Mr. W. S. Wain; *Vice-Chairman*, Mr. C. H. Twelves; *Secretary*, Mr. C. W. Ridyard. To represent the Committee on the Pharmaceutical Service Sub-Committee of the Insurance Committee: Messrs. J. Gelsthorpe, C. W. Ridyard, and W. S. Wain. To represent the Committee on the Military Service Sub-Committee of the Insurance Committee: Messrs. E. Crossley, J. Gelsthorpe, F. J. Houston, J. Osborne, C. W. Southern, C. H. Twelves, W. S. Wain, and the Secretary. The Secretary reported receipt of a credit from the Central Checking Bureau of 7*l.* 9*s.*

Essex.—The number of prescriptions dispensed in the area of the Essex Insurance Committee in July is 28,000 more than any previous month since the coming into force of the National Insurance Act. The Pricing Bureau is short staffed, but is working overtime with a view of getting the data ready so that chemists' cheques can be sent at the usual date. If there is any slight delay, chemists will understand the reason.

Sheffield.—Mr. A. Neal was elected *Chairman* at the last meeting of the Insurance Committee. Payment was ordered to chemists of 1,065*l.* 18*s.* 4*d.*, as compared with 728*l.* 1*s.* 1*d.* at the same date last year. The scripts dispensed in July aggregate over 50,000, which is a record number.

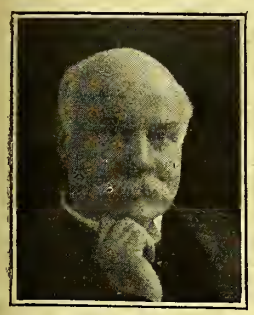
Wiltshire.—The number of prescriptions dispensed during 1917 was 100,437, the cost 2,769*l.* 5*s.* 8*d.*, and the average price per prescription 6.51*d.*

Marriage.

Fielding—Barlow.—At St. Peter's, Phibsboro', Dublin, on August 7, by the Rev. J. J. Gilmartin, C.M., Charles Henry Fielding, Ph.C., F.C.S., Cork, to Helen, daughter of the late Mr. John B. Barlow, Shrough House, Tipperary.

Deaths.

Buddles.—As briefly recorded in our last issue (p. 39), Mr. William Buddles, chemist and druggist, 46 Churton Street, London, S.W. 1, died on July 30, aged fifty-three. Mr. Buddles was a well-known figure in Metropolitan pharmacy, and was greatly respected for his integrity and his open-handed generosity. For many years he was a member of the Western Pharmacists' Association. He leaves a widow, a son, and a daughter. The funeral took place at Hanwell on August 3. Many floral tributes testified to the regard in which Mr. Buddles was held by a wide circle of friends. He was a practical pharmacist of the best type, and will be sadly missed.



Mr. William Buddles.

Moore.—At Leafield Villas, Marais Road, Sea Point, Cape Town, recently, Mr. James Moore, chemist. Mr. Moore, who was a native of Ireland, went out to South Africa during the Boer war as a member of the R.A.M.C., and afterwards became manager of one of Heynes Matthews' businesses. About eight years ago he purchased from Petersen, Ltd., a business in Adderley Street, Cape Town, which he conducted with great success. He leaves a widow. The funeral took place at Maitland No. 1 on June 20.

Richards.—At Steephill Castle, Ventnor, on August 11, after a brief illness, Mr. John Morgan Richards, chairman of John Morgan Richards & Sons, Ltd., Holborn Viaduct, London, E.C., aged seventy-seven. Mr. Richards was born at Aurora, Cayuga co., New York, U.S.A., on February 16, 1841. In 1867 he came to London as branch manager for Mr. Van Duzer, a New York wholesale druggist. At that time, as Mr. Richards explained in an interview some years later (*C. & D.*, 1885, p. 256), there were only three American medicines of any repute sold here for actual use in this country. In 1875 he took an office on his own account, and two years later began an advertising campaign on original lines on behalf of American cigarettes—a campaign to which the present popularity of cigarettes in Great Britain is largely due. In 1903 his business was converted into a limited company with a capital of 100,000*l.*, his sons, Mr. John Morgan Richards, junior, and Mr. Nelson Richards, joining him as directors. About this time he purchased Steephill Castle, and thenceforth took a less active part in commercial life, becoming proprietor of the "Academy," and compiling a book of personal reminiscences. Mr. Richards was a founder, and subsequently President, of the American Society in London; he was also the first President of the Sphinx Club. For many years he was associated with the City Temple, in which church he held the office of Treasurer. The death, at an early age, of his brilliant daughter, Mrs. Craigie, the novelist and essayist who wrote as "John Oliver Hobbes," was the occasion of a widespread manifestation of sympathy and esteem. He edited her biography, and, more recently, completed, under the title "Almost Fairyland," a eulogy of the Isle of Wight. His golden wedding was celebrated on January 22, 1914, by a banquet, a full account of which, with portraits, appeared in The Chemist and Druggist, I., 1914, p. 172. Mrs. Richards died on August 12 of that year. The loss of his wife, the sorrows of the war, and the removal by death of several of his contemporaries gradually wore down his strength. The funeral took place at Ventnor on August 14.

Mr. John Morgan Richards.

Mr. Thomas Russell sends us the following appreciation of Mr. Morgan Richards: The death of the *doyen* of American business men in Britain will be deplored by many hundreds who have been the beneficiaries of his untiring kindness and often of that best generosity which benefits by helping a man to dispense with benefactors. He was my master for twenty-three years. In that time I never had an unkind word from him. It was Mr. Richards' conception of employment that every man should have his chance. It was not often that anyone desired to leave his employment, but he would do everything in his power for a man who thought he saw a better job somewhere else. When "The Times" asked me to become advertisement manager my position with him was one of which I can say without boastfulness that it would give him trouble to refill. But when I told him of the offer he said, "You know that we should be willing to pay you just as much as anyone could pay. But this is not a question of money. You are offered a position at the top of your profession. I would not for a moment ask you to refuse it." "The Times" man who saw him at this time said afterwards, "He thinks the world of you." These personal reminiscences are only excusable because they are an index to the character of a man who has been loved by his associates as few men are loved. At the golden wedding dinner to which he was entertained, about a year before the lamented death of Mrs. Richards, Americans and British men of business thronged the tables, eager to do him honour. Later the fiftieth anniversary of his arrival in London was celebrated by the American Society, with the American Ambassador in the chair. Here one saw how he was appreciated by his fellow-countrymen, for Mr. Richards lived, as he has died, a citizen of the United States. After a delightful and eloquent address, Dr. Page insisted upon relinquishing the chair to Mr. Richards' oldest business friend, Mr. William Porter Ward, who had been a fellow-worker with him in the United States from the period immediately after the Civil War. Mr. Richards was, of course, the British representative of many leading American proprietary articles. I think it is not too much to say that he had had the refusal of almost every agency worth having, and he did not take all that he was offered. I remember well a canny citizen who arrived with a white powder which he called "Humpo for the Hump," with a long recommendation as a cure for low spirits. When it had been admitted that the powder consisted solely of saccharum lactis pulv. he at once refused to have anything to do with it. There have been attacks from many quarters on the proprietary medicine industry. It has its weaknesses and its unworthy representatives. There is a great deal to be said for it, all the same. And I can say with assurance that John Morgan Richards never allied himself with anything for which he believed dishonest claims were made. He was proud of his business, and had the right to be so, but those who know him best would not dispute, I think, the opinion that the thing of which he was proudest, and the thing by which he most wished to be remembered, is that he was the father of "John Oliver Hobbes" (the late Mrs. Craigie), who earned great fame among the best critics of the modern novel.

Died on Service.

Beckett.—Engineer George Harold Beckett was killed in action on August 4. Engineer Beckett, who was engaged in transport work, was the second son of Mr. F. Lloyd Beckett (Evans Sons Lescher & Webb, Ltd., Research Laboratories, Higher Runcorn).

Farrell.—Pioneer Frank Clifford Farrell, R.E., was killed in action in France on June 23, aged twenty-eight. Pioneer Farrell passed the Qualifying examination in January 1915, and was subsequently, till he joined the Army, with Mr. S. H. Bird, pharmacist, Coventry. He leaves a widow and a child.

Lloyd.—Captain Walter Henry Lloyd, R.A.M.C., has been killed in action in France. Captain Lloyd, who was the elder son of Mr. Walter Lloyd, J.P., chemist and druggist, Carmarthen, qualified as M.R.C.S. (Eng.) and L.R.C.P. (Lond.) in 1915. He had been on active service at the Western Front for over two years.

Parrott.—Second-Lieutenant Lionel Overton Parrott, R.F.A., was killed in action in France on August 7, aged twenty-five. Second-Lieutenant Parrott, who was the fourth son of Mr. John Parrott, pharmacist, Richmond, Surrey, passed the Qualifying examination in September 1914. He immediately joined the Forces, and went out to the Western Front in the following November. After serving for over three years, he received his commission, and returned to the Front last May. He was a holder of the 1914 ribbon and star. In a sympathetic letter to Mr. Parrott, the brigade commander observes that Lieutenant Parrott was one of the most promising officers of the brigade.

Problems in Education and Training.

By John Humphrey, Ph.C.

Some years ago there was much discussion in American pharmaceutical circles as to whether shop-training should precede or follow the approved course of study usually considered necessary in the case of candidates for the pharmaceutical qualification. Though opinions differed on the main point, and at least one college announced that it would be prepared to grant diplomas to students without shop experience, the views of the great majority of the disputants favoured adherence to the older plan, in accordance with which apprenticeship or pupilage, preferably in a shop, comes first. In this country there has never been any serious disposition to question the view that apprenticeship, using that term in the widest sense, ought to come first in the pharmacist's career; but increasing difficulties in obtaining pupils, or in training them in the pharmacy, have revived the old problem in an acute form.

The solution of this problem appears to be a compromise between extreme views, and is in itself a very simple, yet practical, way out of the prevailing difficulty. Instead of insisting upon three years' pupilage before entering upon the scholastic course, let a systematic course of instruction in dispensing and the fundamental scientific subjects of our calling occupy a period of six to twelve months before real apprenticeship begins. For some time past I have been in a position to test the efficacy of this plan of first training for shop-work in a well-equipped school, and my experience leads me to recommend it most heartily. The pupil with a sound knowledge of general chemistry and a practical acquaintance with the properties of most substances met with in the pharmacy, in addition to familiarity with the British Pharmacopœia and skill as a careful dispenser, is welcomed in pharmacies where apprentices fresh from school would not be tolerated for a day, and is at the present moment in increasing demand. Let pharmacists give up the pretence of training apprentices in all that they ought to know, and delegate the preliminary training in science and dispensing to expert teachers, and they will soon find themselves in a position to command the services of pupils who will be of real use in the pharmacy from the very beginning, and worthy of such remuneration as may be expected to attract a large number of well-educated young people to the ranks of pharmacy. Moreover, after a year's preliminary training, such as I have briefly outlined, not more than two years' training in the pharmacy should suffice before the student is ready to prepare to enter for the Qualifying examination.

Some of the best junior assistants in pharmacies at the present time have started by taking a systematic course of instruction for the Assistants' examination of the Society of Apothecaries of London. This course now covers a period of nine months, and is sufficient, with capable teachers, to turn out dispensers with a sound knowledge of general chemistry and materia medica, quite fit to undertake any ordinary dispensing-work under the supervision of a pharmacist. If the course were extended to twelve months, it would be possible to give the students a fuller training in practical chemistry, and to add such knowledge of physics and botany as a pharmacist is expected to possess, though I see no particular reason why the study of botany should not be postponed until a later period. It is not inconceivable, however, that the Qualifying examination in pharmacy may, sooner or later, be divided so that the student can be examined in the purely scientific subjects first. In such event botany ought to be included in the first year's course of instruction which I am now advocating as a preliminary to the period of pupilage in the pharmacy, as the Intermediate examination might then be passed before the pupil entered a shop as junior assistant.

Beginning at the age of seventeen, the pupil could be ready to pass the Intermediate examination a year later, and, after spending two years or more as a salaried junior assistant, would not take long to prepare for the Final examination in pharmaceutical chemistry, including the chemistry of the British Pharmacopœia, and in pharmacy, practical pharmacy, and dispensing. But whether or not such a desirable consummation should be attained, everything seems to point to the advisability of such a course of study as I have outlined being allowed to precede service in the shop or dispensary. It would be better both for employers and employed; it would help to shut out the waifs and strays who now tend to drift into the ranks of the permanently unqualified; and it would be decidedly safer for the public if all our juniors had some systematic training before being let loose in a shop or dispensary.

Incidentally, it may be suggested that the adoption of some such plan as experience leads me to advocate for apprentices might help to solve various problems, including those of the Army compounder and the apothecaries' assistant, as well as that of potential students now serving with the Forces. In all such cases some sympathetic consideration appears to be called for, and due allowance ought to be made for any tests the candidates have already satisfied. The apparently insurmountable difficulty of the Preliminary examination could surely be got over in special cases by treating that test as being in reality, as it is in theory, part of the Qualifying examination, and making provision accordingly. But all this is wandering from my main point, which is to emphasise the fact that pharmacists have it in their power to smooth the way both for themselves and for their pupils by encouraging the young people to take an adequate course of instruction in science and dispensing before starting work in the shop.

Personalities.

Mr. Alfred Gratte, pharmacist, Commercial Road, Newport, Mon., has been made Vice-Chairman of the Newport Insurance Committee.

Colonel W. F. Wyley (Wyleys, Ltd., Coventry) has been appointed a member of Sir Henry Fairfax-Lucy's Committee on the Employment of Discharged Soldiers in Agriculture.

Mr. J. Woodcock, 69 Shandwick Place, Edinburgh (representing N. W. Mitchell & Sons, Ltd., London), is slowly recovering from a serious illness, and hopes to take up work again in September.

The Following Subscriptions to the Pharmaceutical Demobilisation Emergency Fund were omitted from the list given in the *C. & D.*, August 10, p. 47: Mr. J. W. Deakin, 10*l.* 10*s.*; Mr. W. S. Glyn-Jones, 10*l.* 10*s.*

Mr. N. F. Warren Fisher, C.B., has been appointed Chairman of the Board of Inland Revenue on the retirement of Sir Edmund Nott-Bower, K.C.B. Mr. H. P. Hamilton, C.B., is to be Deputy-Chairman.

At the Recent Degree Ceremony of the Manchester University, Mr. Edgar Berry, B.Sc. (Pharmacy), had the degree of M.Sc. conferred upon him. Mr. Berry's thesis dealt with digitalis. The degree of B.Sc. (Pharmacy) was conferred on Mr. Karam Samaan, who holds the Egyptian Ph.C. Of three other pharmacy students who passed Inter. Sci., one, Miss Margaret Rideal, is the daughter of Mr. F. Rideal, pharmacist, Glossop.

Information Department.

INFORMATION WANTED.

Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated.

139/61. Vanatonic wine
136/38. Barton's economic white liniment
123/23. "Lister" purifying water-bag
152/40. Brittian's Indian Hair Tonic
147/23. Pathé frères' brilliantine
148/73. "Empire" henna shampoo
122/11. Gold pencil for gilding teeth, made by "Harding, London"

INFORMATION SUPPLIED.

Inquiries regarding the following articles have been answered. The information as to supply will be given to others who send a stamped, addressed envelope to the Information Department, The Chemist and Druggist, 42 Cannon Street, London, E.C. 4:

Adcock's "Kupina," 146/41
"Antipon," 148/23
Atkin's filter, 148/14
Chemists' overalls, 148/61
Grimault's syrup, 147/27
Hair-combs, etc., fancy, 147/46
Hibbert's antiseptic, 145/47
"Iodolysin," 148/21
Lanman's Florida water, 147/28
"Kananga Water," 149/23
Lime-sulphur wash, 147/5
Menthol pencils, 148/6
Phenacetin, British makers, 145/71
Santal Midy, 147/27
Soldier's Friend polish, 147/12
"Spiritine," 148/16
Stramonium cigarettes, 147/27
"Thaolaxine" tablets, 148/15
Woods' smoking-cure, 149/24

APPRECIATIONS.

From a firm of exporters in London:

"We take this opportunity to thank you for the information you give us from time to time in connection with the inquiries we send you."—(25/44.)

From a subscriber in Dublin:

"I may mention I greatly appreciate your kindness, and regret having to trouble you so frequently. In my opinion the Information Department alone is well worth a guinea per year, without the valuable information always obtainable in the *C. & D.*"—(99/14.)

Observations and Reflections.

By Xrayser II.

Mr. Hines was Successful,

I am glad to see, in carrying his motion for the reference back to the Finance Committee of the whole question of the Local Executive Committee's accounts. I do not profess to understand the Secretary's legal statement with regard to these accounts, but from a business point of view the arguments of Mr. Hines and his supporters appear unanswerable. What the Finance Committee will decide when the question again comes before it is on the knees of the gods. I don't know that a bank manager's view is necessarily correct either in law or business, but it will probably have sufficient weight with the Committee to justify Mr. Campkin's forecast. One thing is certain : that these accounts ought to be published in full and any profit they show placed at the disposal of the Executive itself.

"And whispering, 'I will ne'er consent,'—consented."

Similarly, Mr. Currie, saying he would not refer to the difficulties that had been created in the way of Mr. Glyn-Jones's appointment, did refer to them, and went on to deny the truth of certain Press reports of "friction" that had been occasioned by them. As one of those who used this very word—though not, if I remember rightly, with reference to members of the staff (for Mr. Glyn-Jones was not then on the staff)—I should like to say that my remarks, as, indeed, all the remarks I have heard or read in this connection, were based upon and fully justified by the official report of the Council's proceedings and the action of Mr. Glyn-Jones himself. If any misconception of what actually occurred arose, it was due to the policy of secrecy which the Council adopted. The suspicion that the Committee in which the subject was discussed was not exactly a cave of harmony was inevitable, and if the heat engendered there reflected upon the staff, the fact cannot be wondered at. That a hitch of some kind occurred is certain; nobody may have been to blame for it, but the Council did its best to create the impression that a certain amount of dirty linen had got to be washed for which publicity was not desirable.

The Division of the Qualifying Examination

would no doubt be helpful to the demobilised student, but it is not enough fully to meet the case of many whose career has been interrupted by the war, and it might, were it the only step taken for their relief, have the effect of lengthening instead of shortening the term of their studies. The "terms of reference" submitted to the Committee of the Council appointed to consider the subject are so awkwardly stated, and leave the Council's intentions so vague, that we have to take the official assurance that the matter is well in hand very largely on trust, and have sufficient excuse to keep pegging away with suggestions of our own. It would perhaps be over-sanguine to suppose that any suggestions from outsiders have much chance of being adopted; still, it is well that the Council should be made to understand that the general desire of the craft is for a more liberal treatment of these young men than the Society has up to the present shown a disposition to accord them. There are two concessions that might safely be made, and that would substantially meet their case—a temporary lowering of the standard of qualification (it might be on the lines of the old Modified examination) and a temporary lowering of the fees. I have urged the former before; the latter is equally, or almost equally, important. We ought to treat those who have done so much for us not only with justice but generously too.

The Title of Chemist

has, it appears from last week's *C. & D.*, been in dispute in Australia as well as with us, and a re-definition of the term has been demanded. What is really needed is not a new definition, for the old one—"one versed in the science of chemistry"—is satisfactory enough. The fault lies in the narrow views of those who would confine the term to particular branches of chemistry—who (for instance) admit the right of the analytical or the agricultural or even the manufacturing chemist to the title, but deny it to the pharmaceutical chemist and the chemist and druggist. All these may be strictly correct, but none of them is all-inclusive, none necessarily excludes any of the others. And of course they overlap one another; a chemist may be both a pharmaceutical and an analytical chemist. We do not deny the right of the latter to call himself a chemist because he has no connection with our Society; why, then, should the toleration not be mutual? The trouble is due to the Act of 1868, in some respects a foolish Act. In their eagerness to safeguard their own interests the framers of the Act over-reached themselves: they did not really mean to forbid the use of the title chemist to such men as do not keep open shop under that name, any more than they meant to forbid a man who is not a chemist to "sell . . . an open shop," etc., though Clause XV. does so (compare Clause I., which is correctly worded). They went beyond their own intention, and their blunder now recoils upon us. I repeat, however, that as a matter of fact we have never objected to any use of the term "chemist" which does not really contravene the intention of the Act.

Whortleberries,

or "hurts," as they are very properly called in Surrey (the *w* is intrusive and should, of course, be silent), have, I see, engaged the attention of the Food Controller. I sincerely hope he will not forbid their use as food this year, fruit of all kinds being so scarce and my annual visit to a neighbourhood in which they abound close at hand. A most wholesome and pleasant food they are, though Gerard considered them injurious to weak stomachs if eaten raw. 'Lyte, on the other hand, says they are good either eaten raw or "stued with Suger." He adds that of their juice is made "A certayne medicine called of the Apothecaries Rob, the whiche . . . . is good for al the purposes whereunto the beries do serue." I do not find this preparation among the many robs in any of the old Dispensatories I happen to possess, though the berries are mentioned in one of them as being occasionally used in medicine.

Trade Notes.

Photographic Dry-plates.—The prices of photographic plates have been advanced again on the basis of 3*s.* 8*d.* per doz. retail, ¼-plate size. When the war began the price was 1*s.* 3*d.* per doz.

Trench Powder.—In the advertisement of May, Roberts & Co., Ltd., 7, 9, 11, and 13 Clerkenwell Road, London, E.C., in the *C. & D.*, August 10, there was an error in the price quoted for trench powder. The correct prices are 3*s.* 6*d.* per doz.; in 12-doz. lots, 3*s.* 3*d.* per doz., less 5 per cent. discount.

Mineralised Methylated Spirit.—The Secretary of the Methylated Spirit Makers' Association, 13 Harrington Street, Liverpool, informs us that no mineralised methylated spirit can be supplied to buyers, except exclusively for war and medicinal purposes, and that a guarantee will be required from buyers to this effect.

Standard Retail-price List.—Mr. Chas. Philip, 23 High Street, Herne Bay, sends us the August edition of his "Standard Retail-price List." The feature this month is a fuller list of proprietary articles showing the profit percentage, some of which show up very badly. On page 48 are specimens of prescription-pricing according to the list which raise an interesting speculation as to the best method of pricing private prescriptions.

Educational Institutions.—The following are advertising in this issue: Manchester University School of Pharmacy, Manchester Municipal School of Technology, South-Western Polytechnic Institute, Royal Veterinary College, School of Pharmacy of the Pharmaceutical Society, Westminster College of Pharmacy, London College of Pharmacy, Elt's College, Bath and West of England College of Chemistry and Pharmacy, Birmingham University, South of England College of Pharmacy, City of London College, College of Preceptors, and Liverpool School of Pharmacy.

"SANITAS"

DISINFECTANTS

(FLUID, POWDER, AND HARD, SOFT AND TOILET SOAPS).

ALSO

"Sanitas Fluid" No. 2 (Crude). Non-poisonous, disinfectant and deodorant.
"Sanitas-Bactox." Homogeneous Phenoloid Disinfectant; 18/20 coefficient.
"Sanitas Okol." Emulsified Phenoloid Disinfectant; 18/20 coefficient.
"Sanitas Sypol" (Improved Lysol.)
"Sanitas Sulphur Candles."
"Sanitas Formic Sulphugators."
"Sanitas Formigators."
"Sanitas Drain Testers."
"Sanitas Polishes."
} Kingzett's Patents.
"Sanitas Distemper" for walls.
"Sanitas Creoleum" (wood preserver).
Peroxide of Hydrogen (Kingzett's Preserved).

THE "SANITAS" CO., LTD.,
Locksley Street, Limehouse, LONDON, E. 14.

SEED DRESSING.
SULPH. COPPER
and all requirements.
Tomlinson & Hayward, Ltd., Lincoln.

FENNINGS' 50 YEARS' REPUTATION
Children's Powders
ADVERTISED EVERYWHERE. READY SALES.
ALFRED FENNINGS, COWES, I.W.

An announcement of particular interest to you appears in this issue on page 10.

BRITISH
ABSOLUTE ALCOHOL
Jas. Burrough Ltd. D.1. Cale Distillery, Hutton Rd., LAMBETH, S.E. 11

UNCONTROLLED
SACCHARIN TABLETS

Price—
8,000 (one pound) for £7 0 0
4,000 (half-pound) for £3 15 0
Any quantity delivered free. Cash with order.
Can now guarantee immediate delivery.

MANRIEVE & CO., 42 Oxford St., LONDON, W. 1.
Phone: Museum 680.

ELLIMAN

WE engaged this space for an announcement in this Paper, but finding it to be by no means sufficient for our purpose, we are considering the use of the Public Press for that publicity.

(Signed)

ELLIMAN, SONS & CO.

SLOUGH - - BUCKS.

Fletchers' Concentrated Liquors,
offer a perfect alternative to the discarded B.P. Tinctures and Syrups.

FLETCHER, FLETCHER & Co., Ltd., HOLLOWAY, LONDON, N.

Editorial Articles.

Pressing Educational Problems.

The last meeting of the Council of the Pharmaceutical Society was, we think, one of the most helpful that has been held since the war. It seems that, as a consequence of pressure from various Government Departments, the Council is at last taking up some of the problems in connection with demobilisation which we have urged for some time. The time of the Council has been wasted in considering a curriculum scheme, when it was obvious to the rank-and-file that what was wanted was not to make it more difficult for undergraduates to take the pharmaceutical qualification, but to modify the by-laws so that liberal concessions could be made to assistants whose studies have been interrupted at the call of the country. The Privy Council has dealt effectually with the ill-directed efforts to impose a curriculum upon students at the most inappropriate time in the history of the Society. We gather from the reports submitted

at the last Council-meeting that correspondence with the Privy Council is one factor that has caused the Council to take up the general question of the modifications in the present requirements of training and qualification during the period of reconstruction. The Army authorities seem also to have brought the matter to the notice of the Council in connection with the education of students with the Forces, while the Ministry of Labour has been another factor in the situation. Altogether the pressure brought to bear on the Council is such that it can no longer shirk the consideration of the various demobilisation problems. These questions are largely educational, and we hope they will be tackled in a broad-minded way. To enable the Council to do so, we have urged that it should obtain the active assistance of all the heads of the schools of pharmacy and pharmaceutical departments in the country. At present the Council is poorly equipped for the consideration of educational questions. We desire to say without offence that the members of the Council were elected chiefly on a political basis, and not with regard to their views or experience of pharmaceutical education. The Council has, it is true, the advantage of being able to consult Professor Greenish, the Dean of the School of Pharmacy, but the matters to be considered at the present time are such as should be entrusted to a much more widely constituted body. The questions involve profound modifications in the old ideas of qualification, and the opportunity should also be taken to settle the troublesome questions of apothecaries' assistants and dispensing qualification.

The Education Act, 1918, which received the Royal Assent on August 8, is another factor which will have to be considered. A year ago we urged the Council to look into the matter, but so far as is known nothing has been done. The Act provides for the establishment of continuation schools, and the famous Section 10 makes attendance at these schools compulsory for all young persons up to the age of sixteen—after seven years up to the age of eighteen—for 320 or 280 hours in each year. The modification of the age and the requirement of a lower number of hours were introduced while the Bill was in the House of Commons. The age modification has altered the position somewhat, but even now there will be many young persons destined for pharmacy who will leave school before they are sixteen years of age. It is necessary that the Council of the Pharmaceutical Society should consider whether recommendations should be made that such students should attend classes which will deal with subjects needed as a preparation for the pupils' life-work. Some chemists have not realised that the Education Act insists upon attendance at day classes, and that these must not be on half-holidays. This means that so soon as the section comes into force chemists' apprentices who were not above fourteen on the appointed day will have to be released during the day for attendance at school. It would be better that at least part of the instruction obtained at this period should concern the subjects of the pharmaceutical examinations. A sub-section of Section 10 exempts from the obligation to attend continuation schools any young person who is shown to the satisfaction of the local education authority to be under suitable and efficient part-time instruction in some other manner for a number of hours in the year equal to the number of hours during which a young person is required under the Act to attend a continuation school. This seems to afford an opening for schools of pharmacy to conduct apprentice classes. In connection with the training of apprentices we direct attention to a suggestion of Mr. Humphrey, which, while it has the merit of originality, benefits both the pupil and the chemist to whom the young person is to be apprenticed It would certainly be an advantage to a chemist if his apprentice came to him with a knowledge of trade subjects, and it would ensure exemption from the obligation to attend continuation schools. The strain of war has been very great upon chemists, who have been carrying on their business with insufficient help for several years, and any scheme that supplied trained or partly trained assistance must be beneficial.

Luxury-duty Proposals.

The Report of the Select Committee on Luxury Duty has been published this week, and concerns chemists because of the proposal to tax many of the articles sold in the pharmacy. The Committee was appointed on April 30 to consider the proposals made in the Budget statement that articles of luxury and places of luxury should be taxed. The Committee was charged with the duty of preparing schedules of articles that should be taxed. The French luxury tax was taken as the starting-point of the deliberations, and various Sub-Committees were given the task of drawing up lists of taxable articles in different groups. A list of 143 witnesses examined by the Committee and by the Sub-Committees is given, from which it appears Mr. E. T. Neathercoat, Vice-President of the Pharmaceutical Society of Great Britain gave evidence before Sub-Committee II., which is officially described as dealing with "articles used chiefly by women"—probably the toilet-preparations proposals are what Mr. Neathercoat was consulted about. Mr. Ernest Kent, representing the British Brush Manufacturers' Association, a representative of Truefitt's, and two representatives of Boots, Ltd., appeared before Sub-Committee IV. in regard to hair-brushes, tooth-brushes, and nail-brushes. The photographic trade sent as witnesses Mr. Houghton (President of the British Photographic Manufacturers' Association) and Mr. Brooke (Vice-President of the same Association). The Report includes a list of articles, etc., which it is suggested should be taxed. This is divided into (A) articles to be treated as subject to duty, whatever the prices paid; (B 1) prices for meals and accommodation, etc.; and (B 2) articles to be subject to duty if the prices paid exceed the amounts specified against each item. The principle item in Schedule A which interests chemists is "Perfumes, bath-salts, face-powders, and cosmetics other than articles of a medicinal character." This item originally included the words "toilet-creams" and "preparations for the hair." Probably toilet-creams are still included as "cosmetics," the dictionary meaning of which is "a preparation intended to beautify the hair, skin, or complexion"; and perhaps preparations for the hair are also covered, as these often have as an object the beautifying of the hair. It will be noted that the articles referred to are to be taxed "whatever the prices paid," but it should be noted that in the Finance Bill of May, which dealt with the Budget proposals, there was a clause exempting articles sold at less than one shilling. This seems to indicate that the Government intention was not to tax the cheaper kinds of toilet-preparations. Perfumes already bear an enormous tax on account of the spirit they contain when in liquid form, but apparently it is the intention of the Committee to increase what is already a very burdensome tax, because at one of the sittings this point was considered, and it was decided that existing duties do not constitute a reason for exempting articles from further taxation as luxuries. Further, it is mentioned that "the surtax of 1*s.* a gal. on spirits imported in bottle does not affect the spirits used in this country for making perfumery, etc., and the duty on perfumed spirits imported is not *ad valorem*." Schedule A includes also field-glasses, opera-glasses, and telescopes, which some chemists sell. It will be remembered that the proposal is to tax these articles at the rate of 2*d.* in the shilling. With Schedule B 1 we are not concerned, except to remark that if the pre-war annual dinners of Chemists' Associations are revived there will be a call upon chemists here. Schedule B 2 is one upon which the Committee had much trouble in deciding whether the duty should be paid on the amount by which the price exceeds the standard one, or whether the whole sum paid for the article should be taxed. The latter is the one decided upon. This involves the rather anomalous condition that a camera costing 15*s.* would be free of tax, but one costing 16*s.* would have to pay 2*s.* 8*d.* duty. Among the items in Schedule B 2 are the following, the prices given being those above which duty would be payable:

Toilet-soap, at the rate of per dozen tablets 10*s.*

Brushes: Hair-brush, 10*s.* 6*d.*; clothes-brush, shaving, nail, and other toilet brush, 7*s.* 6*d.*

Hand mirror, 15*s*.

Frames of lorgnettes, reading-glasses, spectacles, and *pince-nez* (lenses not to be taxed), 20*s*.

Photographs, executed to order, at the rate of per doz. 2*l*. 2*s*.; enlargements of such photographs, each 1*l*. 10*s*.

Photography: Camera, 15*s*.; photographic accessories, per article, 5*s*.

At the end is a schedule of articles which should be exempted from the tax. The schedule includes the following:

Medical, surgical, and dental requirements and appliances, and scientific instruments and apparatus.

Any instrument or apparatus which is essential for the carrying-on of any business, trade, or profession, when purchased by or on behalf of or for the sole use of the persons engaged in such business, trade, or profession.

The first exemption we have mentioned is stated in a note to be intended specially to exempt such articles as surgical knives, surgical boots, invalid chairs, dental chairs, astronomical telescopes, which might otherwise be taxed under the headings of cutlery, boots, chairs, etc. The second exemption given above is intended to cover articles such as the camera of the professional photographer or the nets of the professional fisherman. The Report raises a good many questions as to the scope of the recommendations, but, in the words of Mr. Harcourt addressed to the public (in a draft Report which the Committee did not accept), it will be necessary to "Be a sport about it. . . . We want to open your money-box, but we will not stand you in the corner while we are doing it. We have learnt that you can do most things with the Briton if you do not approach him in the temper of a nursery governess with the vapours."

The Reform Programme.

The "Script" has done a service by reprinting the programme of the Pharmaceutical Reform Committee, which, it will be remembered, was circulated to candidates at the Council election in May (*C. & D.*, May 4, p. 34). It is a useful reminder that the election of several reform candidates was not the ultimate aim of the Committee. One or two of the items dealing with education and reconstruction problems are already being tackled, and with the programme before them during the vacation the Councillors will, we hope, return from their holidays with schemes to place before their colleagues, which will put under way other portions of the programme.

Refreshment-house Licences.

It is only with some effort that one associates the idea of a refreshment-house with the shop of a chemist and druggist. Yet in law a cooling draught of saline is looked upon as refreshment, and if a chemist were to sell this in his shop between the hours of 10 at night and 5 in the morning, the law would regard him as keeping a shop "for purposes of public refreshment, resort, and entertainment" for which a refreshment-house licence must be taken out. It is true that if a chemist complies, as he must under a heavy penalty, with the recent Lighting, Heating, and Power Order of the Board of Trade, he cannot qualify for the title of refreshment-house keeper, for he is prohibited from having any light in a room in which refreshments are served between the hours of 10 P.M. and 5 A.M. except for cleaning or watching the place. Nevertheless, there appears to be nothing to prevent him getting an Excise refreshment-house licence as before the Order, although the licence, contrary to what is said on the face of it, would not justify him in selling his fruit saline between 10 P.M. and 5 A.M., for that would be a breach of the Order. It is not easy to see why the Customs and Excise authorities should continue to issue the licence at all, though there may be reason for a person who has had the licence for premises continuing to take it out. For it has to be borne in mind that by another of these multitudinous Orders—the Retail Business (Licensing) Order, 1918—no person in Great Britain can, without a licence from the Director-General of National Service, establish or carry on any new retail trade or business, or any new branch of any existing retail trade or business.

Drugs Forbidden to the Forces.

We print on p. 33 the notice from the "London Gazette" adding to the Army Council Order ("Drugs for the Troops") of June 5 (see *C. & D.*, June 15, p. 34) "acetanilidum and phenacetinum and any salts, preparations, derivatives, or admixtures prepared from or with either of them." This adds numerous articles to what was originally known as the Narcotic Drugs Order. The following are some of the additions:

Acetanilide (antifebrin).
Acetphenetidin (phenacetin).
Ammonol.
Antikamnia.
Antisepsine.
Antitoxine.
Curic wafers.
Daisy powders.
Effervescing preparations containing acetanilide or phenacetin.
Elixir acetanilidi co.
Exalgin (methyl acetanilide).
Hydracetin.
Headache powders and tablets containing acetanilide or phenacetin.
Kaputine.
Methyl acetanilide (exalgin).
Mist. exalgin.
Neuralgia-mixtures containing exalgin.
Neuralgia-tablets containing acetanilide or phenacetin.
Neuronal.
Phenacetin (acetphenetidin).
Phenalgin.
Pulv. acetanilidi co.
Tabellæ acetanilidi.
Tabellæ phenacetin.

This is quite a respectable list. On the other hand, it will be noted that neither the original Order nor the additions include antipyrin, chinaphenin, citrophen (*p*-phenetidin citrate), eupyrine (*p*-phenetidin vanillin ethyl carbonate), kryofin (*p*-phenetidin methyl glycollate), lactophenin (*p*-phenetidin lactate), *p*-phenetidin agarate, camphorate, citrate or lactate, triphenin, phesin, or pyrantin.

A Medical Examination.

The General Medical Council has power to send representatives to the examinations held by any of the medical qualifying bodies in the United Kingdom. In exercise of this power, representatives were present at the examinations of the Apothecaries' Hall of Ireland during last year. The examinations are probably typical of what medical students have to undergo, and the report only attracted our attention on account of the part dealing with practical pharmacy. This is what the G.M.C. representative reports:

I attended this examination, which was held in the large pharmaceutical laboratory of the Apothecaries' Hall, and, curiously enough, the examination struck me as being rather perfunctory.

The candidates were asked how to make up a cachet, and neither was very clear as to how to put the apparatus together.

One candidate suggested, in answer to a question, that a cachet would be a useful method for administering a dose of sulphate of magnesium, the cachet provided being capable of containing at most 15 grains.

They were then asked how to make pills and silver them. This they both knew, but neither knew how the directions for silvering pills would read in Latin if he saw it in a prescription.

Nearly all the time was taken up in attempting to decipher very ancient prescriptions—some so illegible that the examiners themselves could not read them—but there were no serious mistaks made, and none that experience would not correct in a short time.

It is interesting to know that both candidates passed, having obtained 55 per cent. of the possible marks. Those of our readers who are chemist-opticians will, in view of the fact that medical men often claim a monopoly of a knowledge of the eye, be interested to read about the examination in ophthalmic surgery. One candidate was asked about keratitis, which he said was inflammation of the cornea; when asked, "Where is the cornea?" he replied, "At the back of the eye." The report adds:

By the time the examination was over he had learned that the cornea was within his ken, but I had now no further interest in the business. He deserved a 0 for his eye work, but Dr. A suggested 60 per cent., Dr. B 40 per cent. After a consultation he was given, I think, 43 per cent.

The Privy Council Visitors to the examinations of the Pharmaceutical Society should occasionally change places with the examination representatives of the General Medical Council, and then perhaps they would realise what ignorance in examination candidates really is.

EDUCATIONAL INFORMATION

Learning by study must be won, 'twas ne'er entailed from sire to son.

Preliminary Examinations.

The number of candidates for the pharmaceutical examination is necessarily very small during the war, but it is obvious that the schools of pharmacy must "carry on" in the meantime so as to be in a position to cope with the demand for instruction which will arise when the war is over. At present women are the mainstay of the examinations, and many brilliant careers in pharmacy have been started by the gentler sex. The fact that there was before the war a great shortage of chemists' assistants, and that that condition will continue, makes it probable that the drug-trade can absorb without inconvenience a large number of women aspirants. Thus there should be no fear that male assistants will be adversely affected by the invasion of women. With a view of providing information regarding the means of entering the drug-trade we continue the practice initiated over fifty years ago of bringing together in one issue particulars of examinations connected with pharmacy, medicine, dentistry, veterinary surgery, science, and optics. The space which we are able to devote to the information is limited, and hence only an outline is given of the several courses of study, but care has been taken to affix addresses of Secretaries and others who can supply detailed particulars on application.

The entrance conditions for qualification in pharmacy, medicine, and science are alike in some particulars, but not reciprocal unless a certain standard is reached. The simplification of the various entrance examinations is one direction in which those really interested in education are steering. All entrance examinations for professions the qualifications for which are controlled by law should be interchangeable, with a standard decided upon by a central authority. It is possible that the wave of educational development which is expected to arise from the new Education Act will help to this consummation.

Pharmaceutical Preliminary.

The Pharmaceutical Society of Great Britain, whose Secretary and Registrar is Mr. W. S. Glyn-Jones, M.P., 16 Bloomsbury Square, London, W.C., recognises the Preliminary examinations of nineteen universities and other examining bodies. The required subjects of examination are English, arithmetic, geometry, algebra, and two optional subjects. Latin is no longer obligatory before registration as a student, but we recommend students to take the language at this stage if possible. The six subjects may be taken at not more than three examinations.

The *College of Preceptors*, Bloomsbury Square, London, W.C., holds examinations for Senior and Junior Certificates four times a year—viz., in March, June, September, and December. Both grades are accepted by the Pharmaceutical Society, provided that the candidates pass in English, arithmetic, algebra, geometry, and two other subjects. The six subjects may be distributed among three examinations. Fees, 25*s.* and a local fee in March and September, 15*s.* and a local fee in June and December.

The *Educational Institute of Scotland* (Secretary, Mr. H. Cameron, 34 North Bridge, Edinburgh) holds examinations specially for pharmaceutical students in January, April, July, and September. Fee, 1*l.* for the first examination and 10*s.* for any subsequent one.

Welsh students usually present certificates of the Central Welsh Board. Full particulars regarding these and other suitable examinations are given in the "Complete Guide to Preliminary Examinations for Pharmacy, Medicine, Dentistry, Veterinary Surgery, and Science," published by The Chemist and Druggist at 2*s.* 6*d.*, post free 2*s.* 9*d.*

In Ireland persons who propose to register as pharmaceutical chemists are required before beginning an apprenticeship of four years to pass the Preliminary examination conducted by the Pharmaceutical Society of Ireland, which, however, accepts in place of it certificates of certain examining bodies. Latin is a compulsory subject in any Preliminary examination accepted by the Irish Society. The subjects of examination are: Latin, English, arithmetic, algebra, geometry, and either French, German, or any modern language. It is held in Dublin on the first Thursdays and following days in January, April, July, and October, commencing at 10 A.M. Fee, 2*l.* 2*s.*; re-examination fee, 1*l.* 1*s.* Particulars can be obtained from the Registrar (Mr. A. T. Ferrall), 67 Lower Mount Street, Dublin.

Veterinary Preliminary.

The subjects of examination are similar to those required of pharmaceutical students, except that in the Veterinary examination English includes history and geography. Latin is optional.

Medical and Dental Preliminary.

The General Medical Council require all candidates desirous of registering as medical students to present certificates which include Latin, though they cannot refuse to register the names of qualified medical men who may not have passed an examination in Latin. In the London Matriculation examination all the subjects must be passed at one examination, but for most of the examining bodies whose certificates are accepted by the General Medical Council the subjects may be passed at not more than two examinations. Further particulars can be had from Mr. F. G. Hallett, Secretary of the Conjoint Board, 8-11 Queen Square, London, W.C.

Pharmacy.

In order to become a chemist and druggist or pharmacist, it is necessary to pass an approved Preliminary examination and be registered as an apprentice or student of pharmacy (fee, two guineas). For the latter, the Registrar of the Pharmaceutical Society, Mr. Glyn-Jones, 16 Bloomsbury Square, London, W.C., will, on request, send a copy of the regulations and an application-form, which gives all the particulars. Apprenticeship is not obligatory, but no person is allowed to enter for the Qualifying (Minor) examination until he or she is twenty-one years of age and produces a declaration that he or she has been *practically engaged in the translation and dispensing of prescriptions for three years prior to applying for admission to the examination.* The Council has passed by-laws giving the power to impose a curriculum on examination candidates, but the Privy Council has so far not sanctioned the by-laws. During his period of pupilage the apprentice should map out and follow a course of preparation for the Minor examination. In the majority of cases the student will be within reach of a technical school, and classes in chemistry, physics, and botany are available at most of these institutions. He should take full advantage of such facilities as exist in his neighbourhood as well as devote himself to private study. The Corner for Students, which has been a feature of The Chemist and Druggist for over fifty years, has been a great help to successive generations of pharmaceutical students in acquiring knowledge of and facility in analytical chemistry. The next course commences in October, and notice will be given of the date in The Chemist and Druggist. The following are suitable books for pharmacy students, but some of the pharmacy schools have their own series of books:

Botany.

"Elementary Botany," Edmonds (Longmans), 2*s.* 6*d.*
"Text-book of Botany," Amy Johnson (Allman), 7*s.* 6*d.*
"Structural Botany": Part 1, "Flowering Plants"; Part 2, "Flowerless Plants," D. H. Scott (Black), each 3*s.* 6*d.*
"Botanists' Pocket Book," Hayward, revised by G. C. Druce (Bell), 4*s.* 6*d.*
"Practical Botany for Beginners," Bower and Gwynne-Vaughan (Macmillan), 3*s.* 6*d.*

Theoretical Chemistry.

"Elementary Inorganic Chemistry," James Walker (Macmillan), 3*s.* 6*d.* (suitable for beginners).
"Text-book of Inorganic Chemistry," Senter (Methuen), 6*s.* 6*d.*
"Modern Inorganic Chemistry," Mellor (Longmans), 7*s.* 6*d.*
"Theoretical Organic Chemistry," Cohen (Macmillan), 6*s.*

PRACTICAL CHEMISTRY.

"Short Manual of Analytical Chemistry," Muter (Baillière), 6s.
"Qualitative Chemical Analysis, Organic and Inorganic," F. Mollwo Perkin (Longmans), 4s.

PHARMACEUTICAL LATIN AND PRESCRIPTION-READING.

"Latin Grammar of Pharmacy," Joseph Ince (Baillière), 6s.
"Medical and Pharmaceutical Latin for Students of Pharmacy and Medicine," R. R. Bennett (Churchill), 6s.

MATERIA MEDICA.

"A Text-book of Materia Medica," Greenish (Churchill), 15s.
"Materia Medica," Southall, revised by E. W. Mann (Churchill), 7s. 6d.

PHARMACY.

"British Pharmacopœia" (Constable), 10s. 6d.
"Practical Pharmacy," Lucas (Churchill), 12s. 6d.
"The Art of Dispensing," MacEwan (C. & D. Office), 6s.

QUALIFYING (MINOR) EXAMINATION.

Every student should also get a copy of "Minor Experiences," published by the C. & D. at 2s. 6d., by post 2s. 9d.; the examination is practical and oral, but the book contains accounts of it by more than fifty who have passed. The examination is conducted by the Board of Examiners for England and Wales (meeting in London) and the Board for Scotland (meeting in Edinburgh). The examinations are held in January, April, July, and at the end of September or the beginning of October. Each candidate must give notice and pay the fee of ten guineas to the Registrar, 17 Bloomsbury Square, London, on or before the 15th day of the month previous to that in which the examination is held. The examination extends over two days, the practical portion of the chemistry and pharmacy and dispensing being taken on the first day. If the candidate is unsuccessful in these subjects, he or she is not called upon to attend the second part of the examination. If successful in the practical work, the candidate is notified of the date of the oral examination in the rest of the subjects. The syllabus can be obtained from Mr. Glyn-Jones.

THE MAJOR EXAMINATION.

This examination for the title "pharmaceutical chemist" is open to all candidates who have passed the Minor examination; fee 3l. 3s. Examinations are held in April and July only, in Edinburgh and London, and candidates must enter not later than the 15th of the preceding month. The examination extends over three days, and includes chemistry, physics, materia medica and pharmaceutics, and botany of a more advanced type than that of the Minor. The examination is partly written and partly practical. Heat and light, electricity and magnetism, taxonomy, the detection of adulterants in entire and powdered drugs by the microscope, gravimetric analysis, gasometric analysis, alkaloidal assays, and the chemistry of carbon compounds are the chief subjects. The examination should be taken soon after passing the Minor, as the syllabus is largely an extension of Minor work.

PHARMACEUTICAL EDUCATION.

The following are the chief institutions in Great Britain offering specialised study in subjects for the pharmaceutical examinations. Full details of the classes can be obtained by addressing the Secretaries of the various colleges:

Aberdeen.

ROBERT GORDON'S TECHNICAL COLLEGE.

Bath.

BATH AND WEST OF ENGLAND COLLEGE OF CHEMISTRY AND PHARMACY, 6 Cleveland Place East, Bath.—Principal: Mr. David J. Williams, Ph.C., F.C.S. Postal instruction given. Special classes and rooms for ladies.

Birmingham.

BIRMINGHAM AND MIDLAND COLLEGE OF CHEMISTRY, PHARMACY, AND BOTANY, 45 Newhall Street, Birmingham.—Principal: Mr. G. L. Scott, Ph.C. Instruction is also provided for the Major and for the Apothecaries' Hall examination.

MUNICIPAL TECHNICAL SCHOOL, Suffolk Street, Birmingham.—Principal: Dr. W. E. Sumpner, M.Inst.E.E. Secretary: Mr. Geo. Mellor.

Blackburn.

TECHNICAL SCHOOL.—Principal: Dr. R. H. Pickard, F.R.S. Two years' day course in chemistry, physics, and botany for pharmacy students specially, also evening classes.

Bradford.

TECHNICAL COLLEGE.—Principal: Professor W. M. Gardner, M.Sc., F.I.C. Minor course of three terms (day), materia medica, pharmacy, and botany; lectures in evening class also. Fees, 5l. 10s. (day course) and 21s. (evening course). Apothecaries' Assistants' examination also provided for.

Bristol.

UNIVERSITY.—Chemistry, botany, pharmacy, and materia medica by Dr. O. C. M. Davis, Ph.C. F.I.C., and other teachers. Registrar: Mr. James Rafter, M.A.

MERCHANT VENTURERS' TECHNICAL COLLEGE.—Principal: Professor J. Wertheimer, B.A., D.Sc. Lecturers on chemistry: Mr. H. A. M. Borland, A.R.C.S., and Miss Annie M. Herbert, B.Sc. Minor classes on Monday, Tuesday, and Friday evenings. Fees, 10s. per class.

Derby.

TECHNICAL COLLEGE.—Principal: Mr. F. W. Shurlock, B.A., B.Sc. Mr. S. Taylor, Ph.C., teaches pharmacy and materia medica on Wednesdays; fee, 1l. 1s. per term. Chemistry and botany classes also.

Dundee.

TECHNICAL AND UNIVERSITY COLLEGES.—All science subjects, including chemistry and botany for pharmacy students.

Edinburgh.

CENTRAL SCHOOL OF PHARMACY, 26 Clyde Street, Edinburgh.—Principal: Mr. W. Beaverley Cowie, Ph.C., F.C.S.

HERIOT-WATT COLLEGE, Chambers Street, Edinburgh.—Principal: Dr. A. P. Laurie, M.A., F.I.C. Pharmaceutics lectures by Mr. William Duncan, Ph.C., F.C.S.

ROYAL DISPENSARY AND SCHOOL OF PHARMACY, 21 West Richmond Street, Edinburgh.—Principal: Mr. W. Duncan, Ph.C., F.C.S., assisted by Mr. W. G. Mackenzie, Ph.C.

Exeter.

EXETER UNIVERSITY COLLEGE.—Evening classes in pharmacy and materia medica are available. Fee 1l. 11s. 6d. per term.

Glasgow.

SCHOOL OF PHARMACY, 180 West Regent Street, Glasgow.—Principal: Mr. M. M. Irvine, Ph.C., D.B.O.A.

Huddersfield.

TECHNICAL COLLEGE.—Minor course includes instruction in pharmacy and materia medica by Mr. J. B. Broadbent, Ph.C.

Hull.

MUNICIPAL TECHNICAL COLLEGE, Park Street, Hull.—Chemistry Department by Mr. Geo. E. Johnson, B.Sc., F.I.C. Evening and day classes in chemistry.

Leeds.

CENTRAL TECHNICAL SCHOOL.—Principal: Mr. R. E. Barnett, B.Sc. Minor course (three evenings per week). Preliminary examination classes at the Central School of Commerce, Woodhouse Lane. A day course for women assistants has been arranged jointly with the Leeds Public Dispensary Board.

COLLEGE OF PHARMACY.—Principal: Mr. F. Pilkington Sargeant, Ph.C., F.C.S. Minor course, October 16. Separate classes for ladies.

Liverpool.

SCHOOL OF PHARMACY, 18 Colquitt Street, Liverpool.—Principal: Mr. H. Humphreys Jones, Ph.C., F.C.S. Full Minor courses. Also Apothecaries' Assistants' examination course.

London.

SCHOOL OF PHARMACY, 17 Bloomsbury Square, London, W.C.—The staff includes: Mr. J. Small, M.Sc. (Lond.), Lecturer in Botany; Mr. C. E. Corfield, Lecturer in Chemistry; and Professor Henry G. Greenish, F.I.C., F.L.S., Pharmaceutics. Dean: Professor Greenish.

LONDON COLLEGE OF PHARMACY, 361 Clapham Road, S.W. 9.—Principal: Mr. Henry Wootton, B.Sc. Courses of instruction are provided for the Minor and Major examinations, and for the Assistants' examination of the Apothecaries' Society. There is a botanical garden at the College. Separate classrooms and museums for women students.

SOUTH OF ENGLAND COLLEGE OF PHARMACY, 186 Clapham Road, London, S.W.—Principal: Mr. H. Lucas, Ph.C., F.C.S.

WESTMINSTER COLLEGE OF CHEMISTRY, PHARMACY, AND BOTANY, 190 Clapham Road, London, S.W. 9.—Principals: Mr. G. S. V. Wills, Ph.C., and Mr. P. H. Woodnoth. Courses for the Apothecaries' Hall examination, and postal courses of instruction for all the Pharmaceutical examinations are also conducted.

MISSES M. E. BUCHANAN, S. J. HEYWOOD, AND D. MAUGHAN, Gordon Hall, Gordon Square, London, W.C., are pharmaceutical chemists who, as women, are specially versed in the requirements of those of their sex who need training in the subjects of the Pharmaceutical examinations or in dispensing. Individual coaching and short courses of dispensing, chemistry, and materia medica can be arranged.

ELT'S COLLEGE, North Finchley, London, N. 12.—Principal: Mr. E. E. Elt, B.Sc. Minor and Apothecaries' Hall courses in day classes. Postal tuition also, which may be combined with practical work at the College.

BATTERSEA POLYTECHNIC, Battersea Park Road, S.W.—Complete day and evening courses in chemistry, botany, physics, etc. Evening courses in pharmacy, dispensing, materia medica, botany, chemistry, and physics for the examinations of the Pharmaceutical Society, the Conjoint Board, and the Apothecaries' Hall.

CITY OF LONDON COLLEGE, White Street, Moorfields, London, E.C.—Chemistry classes suitable for the Minor examination. Secretary, Mr. David Savage.

WEST HAM MUNICIPAL TECHNICAL INSTITUTE.—Principal: Dr. J. R. Airey. Course in pharmaceutical subjects.

SOUTH-WESTERN POLYTECHNIC INSTITUTE, Manresa Road, Chelsea, S.W.—Courses (day and evening) for the Minor, Major, and Apothecaries' Hall. The courses cover two years, but students with a good fundamental training may complete their studies in one session. The Head of the Chemical Department will advise students as to the suitable courses of study, also for post-graduate students. Full particulars may be obtained from the Secretary of the Institute (Room 75).

Manchester.

UNIVERSITY OF MANCHESTER.—The Minor and Major courses in the Pharmaceutical Department commence in October and extend over six or nine months, the composition-fees being 15l. 15s. and 19l. 19s. respectively. Students with previous adequate knowledge of science subjects can arrange to attend one whole day each week. A complete two-years' part-time course for the Minor examination is given partly at the Municipal School of Technology and partly at the University. Degree courses in pharmacy are available here; average cost per session, 20l. to 25l. Mr. James

Grier, M.Sc., Ph.C., is the pharmacy instructor, and Mr. E. G. Bryant, Ph.C., F.C.S., Principal of the Northern College of Pharmacy, has been appointed lecturer in chemistry.

Municipal School of Technology, Sackville Street, Manchester.—Course for the Minor examination in connection with the University. For prospectus apply to the Registrar of the School of Technology.

Manchester College of Pharmacy, 292 Oxford Road.—Principals: Mr. Harry Brindle, Ph.C., F.C.S., and Mr. Charles Turner, Ph.C., F.C.S. Minor and Major classes. Two special ladies' classes for the Apothecaries' Hall examination.

Northern College of Pharmacy, 100 and 102 Burlington Street, Manchester.—Principal: Mr. E. G. Bryant, Ph.C., F.C.S. Minor course. Part-time classes of the College are arranged in conjunction with those of the School of Technology. Major courses are also provided. A ladies' course is provided for the Apothecaries' Assistants' examination. Correspondence tuition for all examinations is also offered.

Nottingham.

University College.—Evening courses preparing for the Minor examination. Course for women dispensers. Acting Registrar: Mr. J. E. Shimeld.

Plymouth.

Municipal Science Schools.—Principal: Mr. W. S. Templeton, M.A., B.Sc. Day course in chemistry and dispensing. Evening pharmaceutical courses in chemistry and botany. Day part-time pharmaceutical course.

Portsmouth.

Municipal College.—Principal: Mr. Oliver Freeman, B.Sc., A.R.C.S. Pharmaceutical courses (day and evening) in the subjects for the Minor (two years) and Major (three years).

Salford.

Royal Technical Institute.—Special day courses in chemistry and physics are arranged for pharmaceutical students on the lines proposed by the Pharmaceutical Society. Information with regard to these courses may be obtained from the Principal of the Institute, Mr. B. Prentice, D.Sc., Ph.D.

Sheffield.

Central Secondary Schools.—Principal: Mr. J. W. Iliffe, M.A. Pharmaceutical course (evening) extending over three years, with Mr. E. Preston, Ph.C., as instructor in pharmacy and materia medica. Classes in botany, chemistry, Latin, and other subjects are held.

Southampton.

University College.—Minor and Major courses from October to June. Apothecaries' Assistants' examination. Evening classes in chemistry, botany, and physics suitable for pharmaceutical students. See "Prospectus of Courses for Pharmaceutical Students," to be obtained from the Registrar.

Ireland.

The examination and registration body in Ireland is the Pharmaceutical Society of Ireland, 67 Lower Mount Street, Dublin, whose Secretary and Registrar is Mr. A. T. Ferrall.

Licence Examination.

For this examination, to qualify as pharmaceutical chemist, the conditions to be fulfilled by candidates are as follows:

After passing a Preliminary examination, and being registered as an apprentice, the person must serve four years as apprentice or assistant *in an open shop*, and the candidate must spend the business day with his employer. He must also attend three-months' courses of lectures in theoretical chemistry, botany, and materia medica, and a three-months' course of practical chemistry (after the lectures in theory) at an approved institution, and must be twenty-one years of age.

The examination commences at 10 A.M. on the second Wednesdays of January, April, July, and October, and is held at 67 Lower Mount Street, Dublin. Candidates must give the Registrar notice of intention to attend fourteen clear days before the date of the examination and pay a fee of 5*l*. 5*s*.

The subjects of the Licence examination are:

Botany: Recognition of the principal indigenous plants used in medicine, their natural orders, and the characters of their several parts.

Materia Medica: Recognition of B.P. drugs; their characters, active principles, sources, official preparations, and adulterations.

Chemistry: Elementary laws of chemistry and physics, including equations. Recognition of B.P. chemicals, the processes by which they are obtained, qualitative analysis (including B.P. tests) and volumetric analysis, and a practical examination in these subjects. (The Council recommends Corbyn and Stewart's "Physics and Chemistry.")

Practical Pharmacy: Translation of Latin prescriptions, detection of dangerous doses, and compounding and dispensing. Processes of making and recognition of B.P. non-chemical preparations, and an intimate knowledge of the Sale of Poisons (Ireland) Act.

The examination is written, practical, and oral. Minimum pass percentage in pharmacy is 50 and in botany, materia medica, and chemistry 40 each, with 55 per cent. in the aggregate. Honours are given to candidates who take 70 per cent. of the total marks, with not less than 50 per cent. in any subject.

The Examination for Assistants to pharmaceutical chemists is held quarterly on the Saturdays following the Licence examination, so as to meet the convenience of those who fail to obtain the licence. Fee, 1*l*. 1*s*. The subjects are prescription-reading and translation (including the detection of unusual doses, practical dispensing, materia medica, pharmacy (including recognition of non-chemical pharmacopœial preparations and a knowledge of the proportions of active ingredients in these), and the laws relating to the sale of poisons in Ireland.

Registered Druggist Examination.

The subjects of this examination are prescribed by the Pharmacy Act, 1890, in the following terms:

English orthography and composition.

Arithmetic and the weights and measures of the British Pharmacopœia.

The appearance and properties of the various drugs and chemicals in general use.

The Sale of Poisons (Ireland) Act.

The examination is open to anyone who has served as an assistant or apprentice for not less than four years to a pharmaceutical chemist, chemist and druggist, registered druggist, or licentiate apothecary keeping open shop. It is held in Dublin and Belfast (if twelve candidates apply) on the second Tuesdays of January, April, July, and October. Fee, 4*l*. 4*s*.

Re-examination Fees.—Pharmaceutical Licence examination, 2*l*. 2*s*.; Assistants' examination, 1*l*. 1*s*.; Registered Druggist examination, 10*s*. 6*d*.

For the examination questions see the Calendar of the Society (2*s*. 9*d*. post free from the Registrar).

Scholarships and Prizes.

There are several scholarships and prizes connected with pharmacy available either for apprentices or for those who have passed the Qualifying examination. We give a list of these, but those marked with an asterisk are suspended during the war. Further particulars are obtainable from the Secretaries or institutions mentioned:

Aberdeen Pharmaceutical Association prizes.

*Bell Scholarships.—Pharmaceutical Society of Great Britain.

Burroughs Scholarship.—Pharmaceutical Society of Great Britain.

Clayton Scholarship.—Mr. E. G. Bryant, F.C.S., 100 and 102 Burlington Street, Manchester.

Corner for Students prizes. The Chemist and Druggist, 42 Cannon Street, London, E.C. 4.

Edinburgh Chemists, Assistants', and Apprentices' Association prizes.

*Fairchild Scholarship and Prizes.

Haslett Medal.—Chemists and Druggists' Society, Belfast.

Herbarium Competition.—Pharmaceutical Society of Great Britain.

Hewlett (Charles James) Memorial Exhibition.—Pharmaceutical Society of Great Britain.

Kinninmont Prize.—Secretary, Mr. W. L. Currie, 223 Byres Road, Dowanhill, Glasgow.

*Manchester Scholarship.

Martindale Medal.
Pereira Medal.
Ransom Research Fellowship.
Redwood Scholarship.
} Pharmaceutical Society of Great Britain.

Pharmaceutical Society of Great Britain.—In addition to the scholarships and prizes mentioned above, there are silver and bronze medals offered annually for competition.

Pharmaceutical Society of Ireland.—Council gold and silver medals.

Apothecaries' Assistants' Certificates.

Women dispensers are much wanted owing to man-shortage, and the qualification best adapted for this temporary purpose is the Assistants' certificate offered by the Society of Apothecaries, Water Lane, Blackfriars, London, E.C. The certificate, which entitles its holders to act as *assistants to apothecaries* who are licentiates of the Society, is obtained on the following conditions:

(*a*) The candidate (male or female) must be at least nineteen years of age.

(*b*) A certificate of sound general education must be produced.

(*c*) A certificate signed by an apothecary's assistant holding a public appointment, a registered chemist and druggist, or a registered medical practitioner, showing that special instruction in practical pharmacy has been taken for nine months.

(*d*) The candidate must pass an examination in (1) compounding and dispensing medicines, (2) chemistry, (3) materia medica and pharmacy, and (4) prescription-reading.

Particulars can be obtained from Mr. Frank Haydon, L.R.C.P., Secretary to the Court of Examiners, The Apothecaries' Hall, Blackfriars, London, E.C.

The Apothecaries' Hall of Ireland, 40 St. Mary Street, Dublin, holds an examination for a similar certificate to the London one on the first Friday of each month except August. Fee, 4*l*. 4*s*. (re-examination, 2*l*. 2*s*.).

(*To be continued.*)

Trade Report.

42 Cannon Street, E.C. 4, August 15, 3 p.m.

With the holiday season now at its height, the usual summer dulness seems more apparent this week, and it has again been an uneventful one. The good news from the Western Front has a sentimental influence on business, inasmuch as it induces cautiousness and abstention from buying. Prices of practically all kinds of produce are very high, and naturally the trading is strictly confined to current wants. In connection with the active intervention of the Allies in Russia it is possible that there may be a large demand for certain pharmaceutical chemicals, and if this should materialise it would mean a further depletion of stocks on the spot. This might possibly lead to some unexpected changes in values, especially in view of the difficulty of importing from America. Very few imports are coming forward from Switzerland and France, and in the former country the whole of the supplies of phenacetin, phenazone, aspirin, etc., are being conserved for home consumption. The principal changes include a firmer market for methyl salicylate and phenazone. Stocks of quinine are depleted, and it will be some weeks before further supplies are available, so that the price may go appreciably higher. Almond and clove oils are dearer. Coriander and fenugreek seeds have advanced. Pepper, cloves, and pimento are dearer, with a renewal of speculative interest. Menthol on c.i.f. terms has been sold at firmer rates. Sal ammoniac and turpentine are dearer.

Higher	Firmer	Easier
Almond oil	Agar-agar	Cassia lignea
Clove oil	Arsenic	Farina
Cloves	Menthol (cif.)	Gingers
Coriander-seed	Methyl salicylate	Mint oil (Jap.)
Fenugreek-seed	Phenazone	Shellac
Pepper		Wax vegetable (Jap. spot)
Pimento		
Sal ammoniac		
Turpentine		

Cablegram.

New York, August 14.—Business is active. Menthol is dearer at $3.45, and peppermint oil in tins has advanced to $3.35. Cartagena ipecacuanha is dearer at $3.20 per lb., and for podophyllum-root the higher rate of 9c. is asked. Belladonna-root and Canada balsam are both dearer at $2.85 per lb. and $6.00 per gal. respectively.

Agar-agar is firmer, with spot sales of No. 1 Kobe at 3*s.* 4*d.* and buyers; sales for August-October shipment have been made at 3*s.* 1*d.* c.i.f. and buyers. During the five months ended May 31 the exports from Japan were as follows:

To	1916 Kin	1917 Kin	1918 Kin
China	336,487	488,371	133,086
Hong-Kong ...	248,024	206,658	110,920
Straits Settlements	78,259	63,229	37,405
Dutch Indies ...	210,785	119,350	121,358
Asiatic Russia ...	139,042	434	62
Great Britain ...	251,865	55,472	1,222,239
France	232,921	46,400	—
U.S.A.	346,072	150,414	67,336
Other countries ...	149,363	116,432	18,289
	1,992,818	1,246,760	1,780,725

Almond Oil.—The English pressers of sweet (B.P.) have advanced their price to 4*s.* 2*d.*, and cwt. lots to 4*s.* per lb. Essential oil of bitter almond (s.a.p.) has also been advanced by 5*s.* per lb. to 55*s.* The nominal price of apricot or peach kernel oil (ol. persic.) is 3*s.* 2*d.* net and 3*s.* for 1-cwt. lots, but with the great scarcity of apricot kernels supplies of oil are very limited.

Anise is quoted 77*s.* 6*d.* per cwt. for fair Russian, but no business has been reported.

Anise Oil, Star, is steady, spot value of "Red Ship" brand being 5*s.* per lb., and 4*s.* 7½*d.* c.i.f.

Antimony.—Although there is but little change in the position, the fact deserves notice that, after a long interruption, some business has been put through for fresh importation. The price paid for Chinese crude August-September shipment from China is 33*l.*, free on board, the equivalent of which on c.i.f. terms would be considerably over 50*l.* per ton. Assuming, however, that this is a special order with the metal to be shipped at a cheap freight rate, the cost of import c.i.f. U.K. would be about 42*l.* There seems no doubt as to the licence being granted, but attempts made in other directions to procure import permits have remained unsuccessful. The limited quantities available on the spot attract a few inquiries, but sellers at less than 50*l.* cannot be found. Business in regulus hangs fire, forward orders being held up by the refusal of Government facilities, and prices remain at about 76*l.* to 78*l.* Chinese white oxide of antimony is scarce, home makers offering sparingly, while shipments from China against old contracts are still hung up through lack of freight-room.

Arsenic.—There has been a further improvement in the trade demand, and prices have once again firmed up, although there is not a great deal of business being done. Holders' views have been strengthened by the dearth of the receipts of foreign material. There is, however, no very optimistic feeling as to the future trend of prices. Best Cornish powder in 10-ton lots can be obtained from agents here at 100*l.* per ton for August-September delivery, while quotations range up to 105*l.* for small lots. Consumption continues at a satisfactory rate, but consumers are not badly provided, and prefer to go slow.

Aspirin has been in good demand, and the majority of dealers appear to be sold out for the present. It is difficult to understand what has become of the recent stocks; 12*s.* is the nominal value.

Barbitone remains unchanged at 102*s.* 6*d.* on spot. The demand is, however, good.

Benzoic Acid.—English make is difficult to obtain, but it is hoped that as more is obtainable in the United States permits to import will be granted more freely, so that this market may enjoy the benefit of the cheaper prices ruling on the other side.

Benzonaphthol.—Stocks on the spot are becoming short; there are sellers at 42*s.* 6*d.* per lb.

Bromides.—The stocks of potash bromide imported by the Government having now been allocated, there is apparently nothing left but Japanese, for which holders ask and obtain 8*s.* 9*d.* to 9*s.* per lb.; soda is 5*s.* 6*d.*, and ammon. 9*s.* 6*d.* to 10*s.* According to mail advices American makers have only got limited quantities to spare for this market, as their home requirements are now much larger than in peace time. See also p. 50.

Camphor (Refined) is steady, with Japanese 2½-lb. slabs offering at 4*s.* 8*d.*, and ¼-oz. tablets at 6*s.* on the spot; to arrive slabs offer at 4*s.* 9*d.* c.i.f. The exports from Japan during May amounted to 191,863 kin, valued at 395,515 yen. During the five months ended May 31 the exports were as follows:

	1916	1917	1918
Kin	2,293,160	1,355,178	967,307
Yen	2,138,348	2,180,077	1,866,129

The destinations were as follows:

To	1916 Kin	1917 Kin	1918 Kin
British India ...	657,066	259,324	245,304
Asiatic Russia ...	173,391	—	—
Great Britain ...	607,157	46,463	235,514
France	180,528	45	23,965
United States ...	572,946	979,774	329,321
Australia	27,085	8,738	42,357
Other countries ...	74,987	61,334	90,846
	2,293,160	1,355,178	967,307

Canary-seed is quiet but firm at 275*s.* to 285*s.* per quarter for fair to good Morocco.

Capsicums.—Sellers of fair bright Bombay quote 90*s.* per cwt. on the spot.

Cascara Sagrada.—The London stock at the end of July 1918 was 28 tons, against 87 tons at the corresponding period of July 1917. An advice from Chehalis, Washington, reports: "The highest price in the history of the cascara-bark industry is now being paid for this much-valued product. The season for peeling is now in full swing, and hundreds have been attracted to the industry by the 10½c. per lb. now being paid.

Cassia Lignea is quiet and rather easier, whole selected offering on the spot at about 130*s.* per cwt.

Chloral Hydrate.—No private imports appear to be coming in from the U.S.A., and as the demand still continues the market is very firm at 13*s.* 6*d.* net in bond for crystals to come forward.

Citric Acid is nominally 3*s.* 5*d.* per lb. on the spot.

Clove Oil.—English distillers, following the advance in the spice, have raised their prices a further 1*s.* to 24*s.* per lb.

Cloves are dearer, fair sales of Zanzibar having been made at up to 2*s.* 11*d.* to 3*s.* 1*d.* per lb. on spot. The London stock is 11,875 bales, against 15,057 bales in 1917, and 24,584 bales in 1916.

Cod Oil.—At auction on Tuesday 1,072 barrels Newfoundland, Norwegian, and Coast cod and fish oils offered (each containing about 45 gals.), and about 500 sold at from 74*l.* to 83*l.* per ton.

Copper Sulphate.—More interest has sprung up lately, chiefly in connection with the arrangement of some fresh considerable business for shipment to France and Algeria for future shipment. The orders in question are going through the usual official channels, while the necessary permits have to be provided for by the French authorities. Part of the business is presumably also passing through brokers. To all intents and purposes the market is unchanged, the nearest f.o.b. Liverpool price being 65*l.* 10*s.* per ton, less 5 per cent. Exports for the current year will probably continue to compare favourably with last year. The home agricultural demand is only moderately active at the fixed price of 52*l.* net, makers' works.

Coriander-seed is dearer. After a good business in new crop Morocco on the spot at 60*s.* and of old crop at 55*s.* per cwt., higher prices are asked.

Cream of Tartar is offered at from 415*s.* to 420*s.* per cwt. on the spot for 98 per cent. powder.

Creosote Carbonate is practically non-existent at the moment, supplies from Switzerland being lacking.

Cumin-seed has been sold at 55*s.* per cwt. for good sifted new crop Morocco, being steady.

Dill-seed is selling at 54*s.* per cwt. for ordinary East Indian.

Farina is firm, with spot sellers of No. 1 Japanese at 79*s.* 6*d.* to 80*s.* per cwt., and August-October shipment has been sold at from 73*s.* 6*d.* to 76*s.* 6*d.*, c.i.f. terms.

Fennel-seed is quoted 57*s.* 6*d.* per cwt. for East Indian.

Fenugreek-seed is dearer; new crop on passage has been sold this week at 37*s.* up to 42*s.* 6*d.* per cwt., c.i.f. terms, with few sellers under 45*s.* and at 43*s.* on the spot, and holders now asking 45*s.*

Gallic Acid appears to be increasingly used by ink makers, and the lowest price at which it can be bought is 6*s.* per lb.

Gentian is very slow of sale on spot, with a fair accumulation of stock.

Ginger is very quiet, with second-hand sellers offering fair to good common Jamaica at 165*s.* to 170*s.*, Cochin at 165*s.*, Calicut at 160*s.*, and Japanese at 137*s.* 6*d.*

Guaiacol Carbonate is very scarce at 110*s.* per lb. in small lots on the spot.

Lithia Carbonate remains firm at 12*s.* per lb. Only small quantities appear to be available in dealers' hands in the United States, makers being sold out some time ahead.

Menthol for shipment is firmer, with sales of Kobayashi-Suzuki afloat at 13*s.* 6*d.* to 13*s.* 9*d.* c.i.f., and September-October shipment at 13*s.* 10½*d.* c.i.f. Spot market is quiet at from 13*s.* 10½*d.* to 14*s.* The exports from Japan during May were 34,620 kin, valued at 222,247 yen, and during the five months ended May 31 they were:

	1916	1917	1918
Kin	203,865	123,226	127,571
Yen	1,313,810	800,607	752,113

The destinations were as follows:

To	1916 Kin	1917 Kin	1918 Kin
British India	6,572	4,424	8,933
Great Britain ...	90,837	16,110	77,414
France	38,220	1,361	675
United States ...	59,131	95,244	34,701
Other countries ...	9,105	6,087	5,848
	203,865	123,226	127,571

Methyl Salicylate.—The position seems to have become stabilised, as the weak holders have been cleared, and business has been done at the firmer rates of from 6*s.* 6*d.* to 7*s.*, which figures are regarded as reasonable.

Milk-sugar.—Supplementing our statement in last week's issue, we now understand that it is not the intention of the Ministry of Food to interfere in the legitimate distribution of the product by recognised traders, who will buy their supplies from the Government, as they will be the only seller. Such firms will be required to send in returns by August 15 of the quantities dealt in over a certain period. The price will be fixed at a reasonable level, and there will be no withholding of supplies from legitimate distributors and users, the idea being, if possible, to eliminate those "outsiders" who have been making extortionate profits. Arrivals comprise practically 400 packages this week (including 25 tons from Holland), but most of it will go into direct consumption. There are spot sellers at 5*s.*, but there seems to be a tendency to realise commitments in view of the Government control.

Mint Oil.—Japanese dementholised is firm, the spot value of Kobayashi-Suzuki being 4*s.* and 3*s.* 10½*d.* respectively; Kobayashi afloat has been sold at 3*s.* 6*d.* c.i.f.

Paraldehyde.—The position is such that dealers are discouraged from making further importations from the U.S.A., as at 10*s.* per lb., which is the spot price, the business is unremunerative.

Pepper is dearer, black Singapore on the spot having advanced to 2*s.* 1*d.* per lb. for fair, with buyers at 2*s.* 0½*d.*; fair Tellicherry has also been sold at 2*s.* 2*d.*, closing buyers at 2*s.* 2½*d.*, and Aleppy at 2*s.* 1½*d.*, closing buyers at 2*s.* 2*d.* *White* Muntok pepper is also dearer, with sales on the spot at from 3*s.* 6*d.* to 3*s.* 6¾*d.*, closing buyers at 3*s.* 7*d.* per lb.

Phenacetin.—With the heavy stocks on the spot there is no likelihood of an improvement at present, and the position is discouraging to English makers who have to meet the keen competition from the U.S.A. and Switzerland; spot values are from 19*s.* to 20*s.*

Phenazone.—With the exportation from Switzerland still prohibited there is a prospect of a further improvement taking place. In cwt. lots 47*s.* 6*d.* is quoted, and smaller lots at 48*s.* 6*d.*

Pimento is dearer, with spot sales at from 6¾*d.* to 7¾*d.* per lb., there having been a revival of speculative interest. The London stock is 39,406 bags, against 32,232 bags at this time last year.

Potash Iodide.—British makers are readily able to obtain the scheduled price of 13*s.* 10*d.* net. Japanese make is scarce at the moment on the spot, shippers being behind-hand with their deliveries owing to freight difficulties.

Potash Permanganate.—As the result of keen competition between Japanese and American makers, the price in the latter market has further fallen to $1.50 to $1.75 per lb.

Pyrogallic Acid is as reported last week, firmer in America, and all indications point to a further improvement; on the spot resublimed is offered at from 17*s.* 6*d.* to 18*s.*, and crystals at 16*s.*

Quinine.—With the spot stocks depleted it is somewhat difficult to buy at 4*s.* per oz., and some time will elapse before the acute scarcity is relieved.

Saccharin remains in good inquiry, and the lowest price at which business has been done to actual consumers is 260*s.* per lb. net, duty paid, for recognised American brands, but only a limited quantity is available at this figure for 550 pure. Mail advices from the U.S.A. are to the effect that the market there is a rising one owing to the great demand and shortage of sugar, and there is less inducement to export, as makers are getting good prices for home consumption. To-day (August 15) is the last day on which shipments can be made from the United States on the permission issued by the Department of the Import Restrictions in this country. Considering the inevitable delay that ensues on both sides of the Atlantic in obtaining the required permission, much business has been "hung up," and the precarious supply of imported and British-made saccharin is insufficient to satisfy public demand. A New York advice dated July 11 reports that with the growing scarcity of sugar the demand for saccharin seems to be increasing tremendously, and makers find it very difficult to cope with it; the export demand, too, has been heavy, and prices have advanced sharply during the past few weeks; soluble has been sold at $30.00, while insoluble is commanding $25.00.

Sal Ammoniac has advanced 20*l.* per ton to 100*l.* for first quality lump, and to 95*l.* per ton for second quality; crushed is 5*l.* per ton extra.

Salicylic Acid.—Most of the English makers appear to have sold out for the next month or two, and have been able to get better prices than they did a few weeks ago. Sales have been made at from 4*s.* 9*d.* to 5*s.*, with a limited quantity available at 4*s.* 6*d.*

Shellac is quiet and easier inclined, usual standard TN Orange quality offering at from 335*s.* to 340*s.* per cwt., good at 345*s.*, and cakey AC Garnet at 330*s.* per cwt. on the spot.

Sodium Salicylate.—Sales have been made at 6*s.* 6*d.* on the spot.

Salol is regarded as being "too cheap" at present prices, as 9*s.* 6*d.* about represents the cost to import.

Tartaric Acid is steady at 3*s.* 5*d.* on the spot.

Turpentine has advanced 4*s.* per cwt., American closing at 120*s.* on the spot.

Wax, Vegetable.—Japanese is easier on the spot, with spot sellers at 121*s.* per cwt., but August-October shipment is firm, with buyers at 119*s.* c.i.f. Fair-sized quantities have arrived.

Witch-hazel Leaves.—In view of the fact that 8*s.* 7*d.* per lb. was paid at the last drug-sales, there are now offers of several lots at 9*s.* per lb.! The pre-war price was from 3*d.* to 4*d.*

Zinc Products.—There is a steady demand, and the supplies available remain on the whole rather short of current needs, this especially applying to zinc-dust, of which Australian high-grade is quoted 108*l.* c.i.f. U.K. Spot material is practically unobtainable except for the few lots of low-grade English dust, which costs 90*l.* at works, *plus* package. Zinc oxide is rather scarce, while American material is now not being shipped to any important extent. Prices vary considerably, according to analysis, and are mostly nominal. Zinc chloride is firmer, with a good demand, at prices ranging upward of 24*l.* 5*s.* per ton delivered at works.

Arrivals of Chemicals, Drugs, etc.

The following arrivals have taken place at the Ports of London and Liverpool:

To London
(August 2 to 9).

Barytes, 5,000 bgs.
Bronze powder, 12 cs.
Chemical products, unrated, 104 cs. 13 pkgs. 6 brls.
Argol, 166 cks.
Arsenic, 120 cwt.
Borax, 433 cwt.
Boric acid, 283 cwt.
Calcium borate, 2,240 cwt.
Calcium cit., 6 bgs.
Cream of tartar, 40 cks. 31 brls.
Milk-sugar, 200 cs.
Phenazone, 3 cs.
Potash carbonate, 100 cks.
Potash iodide, 19 cs.
Soda hyposulph., 10 tons
Tartaric acid, 20 brls.
Thymol, 264*l.*
Drugs etc., unrated, 90*l.*; herbs, dried, 10 bls.; proprietary medicines, 94*l.*; sedobrol tabs., 5 cs.
Camphor, 175 cs.
Ergot, 9 cs.
Gentian, 154 bls.
Kola, 6 bgs.
Menthol, 30 cs.
Papain, 15 cs.
Rhatany, 33 bls.
Strophanthus, 43 bgs.
Vanilla, 5 cs.
Dyestuffs, tanning materials, etc., 30 brls. 37 pkgs. 20 cks. 1 cs.; dyewood ext., 29 brls.; fustic ext., 5 brls.; logwood ext., 25 brls. and 4 tons; mimosa ext., 2,135 bgs. 426 bxs.; myrobalans, 2,160 bgs., 1,750 pockets; tanners' bark, 356 tons
Gelatin, 1,124*l.*
Perfumery: raw materials, 695*l.*
Plumbago, 428 cks.
Pumice stone, 15 tons
Starches (cwt.): unrated 1,441; corn 1,957; dextrin, 1,515; farina, 3,238; maize, 1,075; potato, 18,749. wheat, 40
Wax, bees', 32 bgs.
Wax, fish, 1,500 cs.
Wax, paraffin, 402 cwt.
Wax, vegetable, 1,449 cs.
Wax, unrated, 80 bgs.

To Liverpool
(August 3 to 10).

Celluloid, 393 cs.
Chemical products, etc: Argol, 2,345 bgs.
Arsenic, 118 cks.
Bromides: sodium, 82 cs.
Calcium borate, 6,960 bgs.
Citric acid, 200 kgs. 100 cks.
Cream of tartar, 128 cks. 24 pkgs. 60 kgs. 100 brls.
Formic acid, 34 cks.
Hexamine, 10 cs.
Hydroquinone, 6 cs.
Iodine, 413 kgs.
Milk-sugar, 51 brls.
Oxalic acid, 20 cks.
Thorium nitrate, 52 cs.
Wine-lees, 210 bgs.
Drugs, etc., unrated, 414 pkgs.
Antikamnia, tabs., 10 cs.
Balsams, 18 cs.
Cascara sagrada, 1,065 bgs.
Centaury herb, 2 cs.
Hydrastis, 4 bls.
Manna, 2 cs.
Sarsaparilla, 67 bls.
Senega, 16 bls.
Dyestuffs, tanning materials, etc; chestnut tanning ext., 2,013 cks.; fustic ext., 225 bxs., sumach, 11,280 bgs.; ground ditto, 2,350 bgs.
Fullers' earth, 380 bgs
Plumbago, 720 bgs. 344 brls.
Talc powder, 3,052 bgs.
Wax, bees', 23 brls.
Wax, paraffin, 5,942 brls.; scale, 7,697 brls.
Wax, vegetable, 36 bgs.
Zinc oxide, 1,168 cks.

The New Cinchona Contract in the Dutch Indies.

The new cinchona contract, which will take the place of the old contract which recently expired, has been practically settled. There are few alterations, says "De Indische Mercuur." Only four producers are not taking part; one of these had already sold his entire crop of bark in advance to Japan, hence he was unable to enter into a contract. It appears, however, that the attitude of the British producers towards the contract has undergone some changes. It is understood that Dr. Lovink is to be President of the Cinchona Bureau in Amsterdam, and that the cinchona contract is being supported by a group of Dutch and a group of British plantations, which together will supply 95 per cent. of the total production of cinchona bark. The four plantations which are outstanding are the one producing 3½ per cent. of the total which has been sold to Japan, and three small ones producing between them 1½ per cent. The associated planters are trying to induce some plantations to deliver them cinchona bark at a fixed unit price with a contract for five years, payment to be made whether or not there are any difficulties of export. The Cinchona Association is advised to do its best for the producers in the new circumstances, even although by doing so the old contract of the Association should be endangered.

An Investigation into the ownership of the capital of the Roessler and Hasslacher Chemical Co., of New York, the Niagara Falls Electric Chemical Co., of Niagara Falls, N.Y., and the Perth Amboy Chemical Co., of Perth Amboy, N.J., is being conducted by the United States Alien Property Custodian. The allegation is that between 80 and 90 per cent. of the capital in these companies is owned by the Deutsche Gold and Silver Scheide-Anstalt, and that there has recently been a transfer of stock of German holders at $400 per share, whereas the book value was $1,550.

Correspondence

Potassium-bromide Supply.

Sir,—We notice in your market report (*C. & D.*, August 10, p. 48) the remark suggesting that the arrangement made by the Government for using certain firms as distributors of the potass. bromid. which the Ministry of Munitions have recently imported from America was not satisfactory to the trade owing to the small quantities which the distributors in question were letting out. Perhaps you will allow us the hospitality of your columns to explain the motives which actuate us in what we are doing with this consignment. It was perfectly obvious that directly this low price for potass. bromid. appeared on the market there would be a scramble for it from all quarters, and that speculation would become rife. The quantity in question being limited, we have felt it our duty to take such action as would keep it out of the hands of speculators while making a fair distribution among legitimate consumers. In this way both the wholesale druggist and the retail pharmacist are protected, and are getting the maximum benefit from the enterprise of the Government in bringing over this not very large quantity of bromide. While we have not consulted the other firms in question on the point, we believe we are right in saying that they are actuated by the same motives in their dealings with this consignment.

Yours faithfully,
Howards & Sons, Ltd.
Ilford. G. E. Howard, Director.

The Kirkpatrick Memorial.

Sir,—The late President of the West Ham Association of Pharmacists, Mr. J. Kirkpatrick, was intensely interested in the Mayor of West Ham's scheme to raise 60,000*l.* for the building and endowment of a new wing to Queen Mary's Hospital. It is intended as a memorial to the gallant men of the borough who have heroically risked, and in many cases sacrificed, their lives for their country in the present war. Mr. Kirkpatrick, with his usual enthusiasm, had aimed at an amount, to be raised by those connected with pharmacy, that would be worthy of such an object. We feel we cannot honour his memory better than by completing his work, and are resolved to raise a sum sufficient for the endowment of a cot, to be named after him. For this purpose we earnestly appeal to chemists to subscribe to the utmost in their power. Contributions should be sent to Mr. W. Potter, High Street, Plaistow, E 13. They will be officially acknowledged in due course by the Mayor of West Ham.

Yours faithfully,
W. T. Johnson,
Hon. Secretary the Kirkpatrick Memorial Committee.

[Mr. Johnson encloses a list of subscribers to the fund up to the present. The sum of 116*l.* 11*s.* has already been collected.—Ed.]

Elliman's Embroglio.

Sir,—Messrs. Elliman will have conferred a boon upon the craft if on account of their high-handed action they stir up a movement among retailers which, starting with the embrocation in question, ends in the taking-up of the whole question of profitless patents. A solid movement of the rank-and-file would win the day, and the psychological moment is now. The requirements are a well-organised movement and an ultimatum to the proprietors that these things must bear a living profit or they will be shut out.

Yours faithfully,
Birmingham. Edw. S. Francis.

Sir,—While Messrs. Elliman may have every right to determine the policy of their firm, they can scarcely expect to determine the policy of the distributors of their products as well. Quite apart from the question of profit, I shall be greatly surprised if the pharmacist of to-day accepts the dragooning policy that Messrs. Elliman seem desirous of imposing upon him. The Executive Committee of the Derbyshire Pharmaceutical Association have decided to recommend the members of their Association to withdraw the products of Messrs. Elliman from sale until such time as the firm find themselves prepared to remove the ban they have seen fit to impose on certain wholesale houses, and until they agree to provide an adequate protected profit on their products. I can imagine other areas will take similar action, for the year is 1918, not 1888.

Yours faithfully,
Codnor. Clement W. Ridyard.

Sir,—Looking at the correspondence published between Messrs. Elliman and the Proprietary Articles Trade Association it is obvious that matters cannot remain in the present *impasse*. The chief trouble seems to be that Messrs. Elliman think an attempt to dictate to them is being made, and from this starting-point an agreement is unlikely. To outsiders the P.A.T.A. correspondence seems courtesy personified. What a pity that a ten minutes' straight talk face to face does not take place. Each side would find the other fellow "a better chap" than he thought, and a solution would be arrived at. However, the next "thrust" ('tis pity) is with Messrs. Elliman. Until then we counsel a little patience upon the part of chemists, when the whole of the position up to date would be clearly before them. Associations, then, should make an official matter of it, and decide which side is worthy of their support. The last few years the cry of Associations has been, "What the P.A.T.A. ought to do for us." A splendid opportunity now presents itself for Associations to show "what they can do for the P.A.T.A." Our hope is that chemists may not fall short of the ideal set up by them in recent years.

Yours faithfully,
Snowden Kirk.
A. R. Keith.
C. Goode.

Poplar.

Corner for Students.

Sir,—As I notice you regularly give a "Retrospect of Fifty Years Ago" in the *C. & D.*, it has occurred to me that the following may interest you. It would be, I think, in 1868, when I was a young assistant in Grattan's, of Belfast, that your journal first began to give prizes for the best set of answers to questions, chiefly on chemistry, in the "Students' Corner" of the *C. & D.* Previous to that time no prizes had been given. I lodged then with a young man named William Macnaughton, who, on seeing that prizes were to be given, made up his mind at once to have a try for one. He had been studying chemistry for some time, and was a well-educated youth. He set to work in earnest, and by the end of a week had his set of answers despatched. He won first prize the first month; first prize the second month; but the Editor passed on the latter prize to the one who had gained third place, seeing that Mr. Macnaughton had already won a first prize. If you can refer to the *C. & D.* of that time I think you will find I am correct. After that Mr. Macnaughton did not compete again; he was satisfied with what he had done. I think one of the prizes he got was Attfield's "Chemistry." I forget what the other was. I of course took a great interest in his competition, and well remember how earnestly he set about it for a week every night each of the two months. We left the shop at 8 P.M., and by 9 he had settled down to the questions, on which he worked for an average of six hours or more every night. Sometimes it was 4 or 5 A.M. before he stopped, and one morning I noticed it was 6.30; but after three hours' sleep he got up, dressed hurriedly, had his bowl of porridge, and was in the shop by 10 prompt! He was a lad of great energy and determination. The chemist who conducted the "Students' Corner" at that time paid Mr. Macnaughton a very nice compliment by saying that his answers to the questions were so correctly put that they had been printed exactly as he had written them. On each occasion after winning the prizes old Mr. Grattan, a grand old man in the truest sense of the word, went round to the dispensing department and very heartily complimented Mr. Macnaughton, as also did Mr. Pring, his son-in-law and partner; also Mr. Foxall and Mr. Green, the two managers. I remember, too, that Professor Hodges, of Queen's College, came in one day and asked me to point out to him the young man who had won the prizes in the *C. & D.* His head was barely visible behind the dispensing-screen at the back. He was a very unassuming youth, and took his honours very modestly. For some time some of the assistants used to try to take their nap off him by asking him ridiculous questions on chemistry, such as "What is the chemical composition of beeswax, Mr. Macnaughton?" But he always turned the tables on them by proceeding to tell them as nearly as possible what he thought would be the composition of such a thing! And so they got to see that it was of no use trying to puzzle him in the way of chemistry. After winning these prizes he certainly shone out as the most intelligent assistant in the shop, and there were nearly a dozen of us at that time. Mr. Macnaughton is still alive, and is now a chemist in America. I retain many pleasant recollections of Mr. Macnaughton and the staff of Grattan & Co. at that time—1867-69. Mr. Macnaughton was one of the most genial fellows I ever met, and I considered myself fortunate in having him as a companion in lodgings. He was a keen all-round student. On Sundays, when we were not on duty, we took long walks into the country, and as a rule Mr. Macnaughton came back laden with wild flowers of every kind he could find, and for hours after he would sit up and study them by the help of a good book or two on botany. On week-nights he had a programme of study pinned up alongside of our fireplace, and he as a rule gave one hour to each subject—chemistry, botany, materia medica, physics, etc. He seldom did less than five hours' study a night during the autumn and winter months. He paid his landlady for any hour of extra gas he burned. The examinations had just come into force about that time, and assistants who wished to pass the Preliminary examination were allowed to go to any clergyman they knew to be examined. Mr. Macnaughton went to an old Scotch divine—Dr. Bryce, of the Presbyterian church which he then attended. His first subject was English. The old doctor said, "Mr. Macnaughton, I don't require to examine you in English; you speak perfect English." And so with Latin and arithmetic: the doctor would soon be convinced that he had these at his finger-ends also, so that he had no difficulty in passing his Preliminary. I could say a good deal more about Mr. Macnaughton, but this is perhaps enough to tell you about the young man who first won your *C. & D.* prizes.

Yours truly,
R. Thomson.

26 High Street, Elgin.

"Lest we Forget."

Sir,—Needless to say I, in common with 90 per cent. of the pharmacists of the British Empire, am thoroughly in agreement with the sentiments expressed in the Editorial under this caption in the *C. & D.*, August 3. The remaining 10 per cent., including, apparently, Mr. R. Cecil Owen, of Chester, even now fail to realise that an economic offensive is likely to be as important a factor in the production of a world's peace as a military victory. The principal purpose of Germany in instigating this war was avowedly the economic dominance of the world. It is to me astounding that even 10 per cent. of average intelligences should by this time have ignored a fact so patent and so cynically admitted by the Hun himself. That, being the main purpose of the war, surely a vigorous counter-offensive is the logical and most effective reply. Mr. Owen (to whom 90 per cent. of his countrymen are Chadbands) misses the whole point of your contention as I understand it. I have read through the article once again very carefully, and I find not the remotest reference to, or even suggestion of, fiscal retaliation. It is not a question of political economics, but merely of whether we as a nation, and as individuals, who have suffered unspeakable things at the hands of a cunning and deliberately treacherous race, should again, at the conclusion of military hostilities, resume association commercially with the members of that race until such time as their offences have been purged. Moral force is far stronger than any political consideration, and the "impracticability" of your proposals exists to my mind only in the imagination of those antagonistic to them. Moreover, the spirit actuating your suggestions is entirely in keeping with the League of Nations—strictly a moral force idea—as anyone reading President Wilson's speeches as a whole can see for himself. Then, again, does Mr. Owen seriously suggest that the world would be any worse off if deprived of German synthetics, present or potential? Is he, after four years of demonstration, still blind to the fact that the best chemists in the world are produced in Great Britain, in France, and in Allied countries, and that in the Teutonic mental outfit there is no such thing as genuine originality?

Yours faithfully,
Vacationist. (68/71.)

The Sweetness of Sugar.

Sir,—The sweetness of sugar cannot be affected by an addition of glucose to beet-sugar (or cane-sugar), for it would not crystallise, and your correspondent "L. J. de W." (*C. & D.*, July 20, p. 52) is quite correct, but he is considerably on the wrong track with his assertion that all dry white sugar contains at least 99 per cent. of sucrose or cane-sugar; also no way of refining can detract from sucrose its inherent sweetness without altering the constituency of the sucrose. You may invert it and reduce thus its sweetness, but it will no longer be cane or beet sugar. Sugar is sold by the degrees of sucrose it contains, and the Customs take notice of these degrees and levy the Customs duties accordingly. This refutes your second correspondent's theory about all dry white sugar containing 99 per cent. sucrose. The deficiency of sucrose in commercial sugar is made up by the presence of trisaccharates of calcium in various degrees, left therein either intentionally or accidentally from the clearing process. The beet-sugar at the present time comes from the United States, where large tracts of land have been for some years, even before the war, devoted to growing sugar-beet.

Yours faithfully,
E. Kur.

Eccles.

Subscribers' Symposium.

For interchange of opinion among "C. & D." readers, and brief notes on business and practical topics, especially new ideas.

Fester Oils.

Nemo (131/4) asks if any chemist can supply a formula for "Fester Oils," which appear to be made in the North of England, and sell in wine-bottles, and smell rather vinegary.

The Treatment of Burns.

Mr. Frank W. Truman, 71 Old Kent Road, London, S.E., writes: "In serving hydrogen peroxide I inadvertently moistened a recent slight burn with it. To my surprise, all pain ceased within a second or two, and the burn, which under ordinary circumstances would have caused at least inconvenience for a day or two, healed at once. Has anybody had a similar experience?"

Who Gets the Profit?

"Quite recently," writes a London importer (143/49), "I unwittingly sold about 5,000 gallons of fine olive oil at 20*s.* and 25*s.* per gallon, but found the import controlled on Government account, and thereby I lost a handsome profit, and my customers had to pay 50 per cent. to 100 per cent. more for their supplies. This oil, of finest quality, was then obtainable freely at 12*s.* to 14*s.* 6*d.* per gallon c.i.f. London. Why should it be necessary for wholesalers to pay 40*s.* to 50*s.* per gallon? What becomes of the difference? There is at least 30*s.* per gallon to account for. Who gets it?"

Legal Queries.

Most difficulties in trade law are explained in the legal section of "The Chemist and Druggist Diary," 1917, beginning on page 353.

Medical (143/45).—Legally qualified medical practitioners are not liable to penalties for practising dentistry or calling themselves dentists. The exemption is conferred by Section 3 of the Dentists Act, 1878.

C. C. (7/8).—"Known, Admitted, and Approved Remedies" must have a disclosure of the composition on the label or a correct reference to some recognised formulary where the formula is given. The reference need not be given on all advertising matter, but must be on the bottle or package.

J. A. (147/62).—Maximum Prices for Lozenges.—On February 2, 1917, the Ministry of Food informed us that "cachous and lozenges of a class manufactured for or sold by chemists prior to or during the year 1916 are not sweetmeats within the meaning of the Sugar (Confectionery) Order, 1917." Full particulars of the decision were given in the *C. & D.*, February 10, 1917, p. 43.

J. W. M. B. (143/62).—Apprenticeship for four years is quite long enough. The wages paid usually begin at 5*s.* a week, and increase by 2*s.* 6*d.* a week every six months. (See *C. & D.*, October 27, 1917, p. 55.) In regard to the wisdom of taking the boy you refer to as an apprentice, the onus is on you to see that he receives proper instruction, and this includes the necessary knowledge to pass the Preliminary examination.

E. M. (144/15).—Insufficient Stamping of Medicines.—It is the first vendor who is responsible for the proper stamping of proprietary medicines, but as the goods to which you refer were probably sold before the increase in the stamp-duty, it is the person or persons who sold the article after October 20, 1915, who should have placed the additional stamp on the bottle. All persons selling the medicine insufficiently stamped are liable to penalties.

J. M. (245/8) has received a recipe for a medicine to be administered to a horse, which contains in each dose 8 gr. of corrosive sublimate. The directions add that the dose is to be gradually increased to 20 gr. "J. M." asks what is his position in the matter. [Mercury perchloride is only occasionally given to horses internally for glanders and farcy, but the maximum dose appears to be 10 gr. Doubtless by gradually increasing the dose the animal would become partly immune, but it would be best to require a properly signed prescription for any dose larger than 10 gr. If the recipe you refer to is not a veterinary surgeon's prescription, you should bear in mind that it is an offence under the Protection of Animals Act, 1911, to administer or permit administration of "any poisonous or injurious drug or substance to any animal" without reasonable cause or excuse.]

Miscellaneous Inquiries.

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

Acetone (130/4).—Aeroplane-dope.—The best general accounts of the manufacture of acetone and amyl acetate for use in making aeroplane-dope are those given in Thorpe's "Dictionary of Applied Chemistry" and Roscoe and Schorlemmer's "Treatise on Chemistry," both of which works you will be able to consult in one of your local libraries. The manufacture of dope for aeroplanes is carried out on a large scale in this country, one of the manufacturers being Cellon, Ltd., with which the late Mr. Thomas Tyrer was connected. There is a good deal to learn before one can make dope satisfactorily and produce an article which will conform with the R.A.F. specifications. It is not only the solution of the cellulose acetate that has to be considered, but the addition of certain softening agents that, while not affecting the waterproofing character of the dope, give a certain resiliency which prevents cracking of the surface.

H. K. W. (132/39).—Use of Coloured Methylated Spirit.—Methyl violet is in itself harmless, but the commercial variety is liable to be contaminated with arsenic. The quantity of dye employed is, however, in our opinion, so small that the amount of arsenic (if any) that could be present may be regarded as infinitesimal, and the spirit can be used for bathing threatened bed-sores with safety.

H. H. (8/8).—The plant you send is *Heracleum giganteum*, N.O. *Umbelliferæ*, a native of the Caucasus, and closely allied to the British cow parsnip (*Heracleum Sphondylium*). It has become quite a weed in large gardens where it has been planted for decorative effect. In regard to its suitability as a paper-making material, perhaps your best plan would be to make inquiries at your local paper-mills. As a rule each fresh material brings with it a crop of technical difficulties which are hardly worth working out unless a large and regular supply of the particular material is forthcoming. The split stems might perhaps be useful for basket-making on account of their toughness.

Nemo (142/21) and *J. C.* (142/74).—American Liniment.—See *C. & D.*, March 30, p. 52.

Kosam (145/33).—Solid Brilliantine.—See *C. & D.*, June 8, p. 52.

A. T. G. (148/59).—Removing Printing.—The identification marks from books such as you send are very difficult to remove. It is almost certain that printing ink was used for the stamping in this case, and as the marking was done many years ago the basis has become thoroughly oxidised. You might try the effect of benzene and turpentine, which should have a softening effect on the basis of the ink.

A. L. R. (148/64).—Removing Tattoo-marks.—A note in the *C. & D.*, September 6, 1913, p. 64, indicated the newest method of eliminating tattoo-marks. In that case injections of fibrolysin were followed by the insertion of nitrate-of-silver soaked threads, the object being to produce acute local inflammation.

B. (141/44).—The rancid olive oil might be improved by shaking with solution of sodium carbonate to neutralise the acids that have caused the rancidity, but this leaves the oil cloudy, which is partly remedied by heating and shaking with exsiccated sodium sulphate. Experiment with a small quantity first to get an idea of the way the process works.

Retrospect of Fifty Years Ago.

Reprinted from "The Chemist and Druggist," Aug. 15, 1868

The United Society.

Some of our correspondents refer to the death of the United Society, but we cautiously abstain from penning its epitaph. At the July meeting, those who came to vote remained to pray that Mr. Buott should reconstruct the Committee, and take such steps as *he* might deem expedient on behalf of the Society. Again, as late as the 7th of this present month, a resolution was passed at a meeting in Liverpool, to the effect that the Executive of the United Society had better announce no policy in relation to the new Pharmacy Act, until legal opinion can be taken on its altered clauses! It cannot be true, then, that the Society is dead. Possibly it is only sleeping, and will soon awake, to astonish its founders, and those who withdrew from it last month, by its changed aspect.

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Gum Catechu Nig., English Ground, 1 cwt. @ 114/- cwt. ; 14 lbs. @ 1/2 lb.
Gum Gualaci, 1 cwt. @ lb. ; 7 lbs. @ 5/- lb.
Gum Juniper, 14 lbs. @ 1/8 lb.
Gum Thus Elect., 2½ cwt. @ 90/- cwt. ; 23 lbs. @ 96/- cwt.
Gum Tragac. Elect., English Ground, 7 lbs. @ 10/- lb. : 1 lb. @ 11/- lb.

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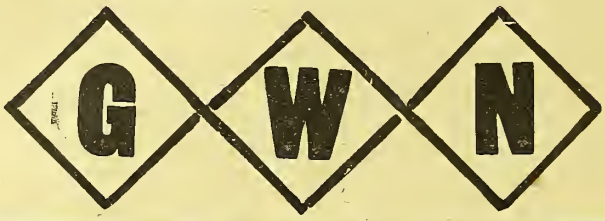

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3.—NORFOLK.—Unopposed mixed village Retail; returns about £1,150; run as a Drug Store; large house; rent only £20; fully stocked; price £300; illness sole cause of sale; suit unqualified or qualified.

4.—LANCS.—Sound Cash Retail, within three miles of Bury; present returns about £1,000; no panel; wine licence; very low rent; same hands many years; population 7,000; good chance for smart man; price £400.

5.—LONDON SUBURB, N.E.—Sound progressive cash Drug Stores in fine main road position; returns nearly £40 a week; no panel; excellent profits; convenient house and premises; well stocked; owner called up; price for quick sale £800; qualified man would soon increase takings to £2,500.

6.—LONDON, S.W.—Good-class Retail and Dispensing Business, in fine position, close to busy station; returns £1,000; no panel; clear net profit over £300; books properly kept; scope for increase, owner retiring; price £450; part could remain; strongly recommended.

7.—LONDON, W.C.—Profitable Cash Retail, increasing; returns, under Manager, £1,050; *net profit* £300; low rent; good position and well stocked; price £450.

8.—LONDON SUBURB, S.E.—Well-established Cash Retail; very profitable, and scope for increase; returns £540 under Manager; *net profit* £250; price £300, about value of stock and fixtures.

STOCKTAKINGS.

We have a few open dates for September, and appointments should be made early to avoid dates clashing. Terms sent on application. 45 years' practical experience.

One Million Tablets Wanted

A firm of manufacturing chemists requires a million tablets, sugar-coated, made from own formula and ingredients. Regular repeats for good maker.

Write Box 142/72, Office of this Paper.

AGENCIES.

BILIMORIA & CO., 121 Dhobitalao, Bombay, 2 (India), with established offices and with exceedingly good connections all over India, are open to accept further Sole Agencies; manufacturers of Patent and Proprietary articles, Chemicals, Drugs, and Galenicals cannot obtain better representation in India than that now offered; correspondence invited. Reference, National Bank of India, Ltd.

TRAVELLER of good address, calling upon Chemists (Midlands and the North), desires additional Agencies in useful sundries. Replies to "Enterprise" (245/10), Office of this Paper.

THOS. TOMLINSON & SON

CHEMISTS' VALUERS, TRANSFER AGENTS, AND EXPERT STOCKTAKERS,

45a MARKET STREET, MANCHESTER.

Established over Half a Century.

Telegraphic Address: "Tomtom."

LEGAL.

RE HARRIS COCKER, DECEASED.

NOTICE IS HEREBY GIVEN that all Creditors and other persons having any claims or demands against the estate of Harris Cocker, Chemist, 23 Cranbrook Road, Ilford, are hereby requested to send particulars in writing of their debts, claims, or demands on or before 30th August next, addressed to Cocker, c/o Messrs. William Fox & Sons, Ltd., 109-11-13 Bethnal Green Road, E. 2, after which the Executors will proceed to distribute the Assets of the said Deceased among the persons entitled thereto, having regard only to the claims of which they have then had notice.

Dated this 7th day of August, 1918.

E. COCKER, 8 Selhurst Road, S. Norwood,
E. K. FOX, 109-11-13 Bethnal Green Road, E. 2,
Joint Executors.

BUSINESSES WANTED.

A GOOD Business wanted, about £3,000 returns, in provincial town or South Coast, or equivalent share in larger concern; a smaller business considered if profitable and expenses low, and situate in pleasant district; cash ready; all replies treated in strict confidence. Apply 250/13, Office of this Paper.

COUNTRY Business wanted; preferably within 30 miles of London; garden attached or near; cash, or would entertain exchange of London business carrying £500 stock. Mention locality, takings, and price to "Urban" (250/37), Office of this Paper.

HIGH-CLASS Retail and Dispensing Business; seaside; £400 down, remainder by instalments. "Genuine" (243/7), Office of this Paper.

SMALL Drug Stores; suit unqualified; town or country, with house accommodation; neglected one would do if an opportunity of working it up. State particulars and price for cash, or part cash and balance by instalments, which must be reasonable. "Drugs" (246/14), Office of this Paper.

WANTED, Small Country Business. State price required, 249/2, Office of this Paper.

WANTED (at once), very small village Business; must have comfortable house and good garden attached. James, 11 Clarence Square, Brighton.

WANTED, Retail Business in country district of Northumberland, Durham, or North Yorkshire. Particulars to Ra, 20 Brockenhurst Road, Croydon, Surrey.

SITUATIONS OPEN.

RETAIL.

BARNSLEY.—Assistant, lady or gentleman (rejected, Grade 3, or discharged), qualification not essential, for brisk Retail and Dispensing (chiefly N.H.I.); middle-class business; outdoors; hours 9-8, Thursday 1, no Sunday duty; previous Retail experience essential; liberal salary to suitable person. Kindly state full particulars as to age, experience, etc., Nash, 2 Queen Street, Barnsley.

BARRY.—Manager (or Locum) wanted immediately. Full particulars, age experience, salary required, enclose photo if possible, W. T. Hicks & Co., Cardiff.

BERKHAMSTED.—Wanted (at once), lady Assistant for Dispensing and Counter in Light Retail. Please apply, kindly stating salary required, etc., to Gibbs, The Pharmacy, High Street, Berkhamsted, Herts.

BIRMINGHAM.—Assistant, lady or gentleman, outdoors, for good-class Dispensing, Light Retail, and N.H.I. Apply, stating full particulars, to "Chemist," c/o Southall Bros. & Barclay, Lower Priory, Birmingham.

BRADFORD PHARMACISTS' ASSOCIATION.—Wanted by the above Association, a qualified Locum to take holiday duty for members during August and September. Apply, with full particulars, to F. E. Burdett, Hon. Secretary, 10 Rose Mount, Bolton, Bradford.

BRIGHTON.—A Junior Assistant required in a high-class Dispensing business (no N.H.I.). Apply, with particulars, to W. H. Gibson, 122 King's Road, Brighton.

BRIGHTON.—Good Dispensing Assistant for the month of September only; outdoors. State terms, etc., Ashton & Co., Dyke Road, Brighton.

BRIGHTON.—Thoroughly capable Assistant for brisk Light Retail; no N.H.I.; good salary to reliable man; comfortable permanent position. James, 11 Clarence Square, Brighton.

BUXTON.—Assistant (lady or gentleman) wanted for good-class business; outdoors; short hours. Please state age, previous experience, and salary required to W. T. Young, Pharmacist, 7 Spring Gardens, Buxton, Derbys.

CARDIFF.—Duck & Son have vacancies for outdoor Assistants; ladies or gentlemen. Apply, stating age, experience, references, and salary required.

GAINSBOROUGH.—Young lady or gentleman, ineligible for Army, required for Light Retail and N.H.I. Dispensing; hours 8.30 to 7, Wednesday 1 o'clock, Saturday 9, no Sunday duty. Apply White, Chemist, Gainsborough.

GREAT MISSENDEN.—Assistant required (at once); about 30; ineligible; must be good Dispenser and used to busy good-class business; not necessarily qualified, and understands Photo work. References and photo if possible, and usual particulars, G. J. Coombes, Chemist, Great Missenden.

GRIMSBY.—Required, young lady or gentleman (discharged soldier) Assistant; Hall qualification; easy hours; good salary. Apply Barkers, Chemists, Grimsby.

HAMPSTEAD.—Assistant (lady or gentleman) in a Family Retail and Dispensing business; two kept; one accustomed to Counter work and Stocktaking not objected to. Full particulars in first letter *re* experience, references, and salary required (outdoors), or a personal interview, Alban Atkin, M.P.S., 243 West End Lane, N.W.

HEREFORDSHIRE.—Qualified Locum (male) required from September 7th to 21st; outdoors. Apply, with terms and references, to R. B. Sandiland, Pharmaceutical Chemist, Leominster.

HUDDERSFIELD.—Unqualified Assistant required for brisk Store business; a comfortable berth with good prospects. Fullest particulars to 247/37, Office of this Paper.

LEEDS GENERAL INFIRMARY.—Assistant Dispensers wanted to take place of present staff called up for military duties. Applications, with full particulars of experience, age, salary required, and copies of recent testimonials, should be addressed to Fred J. Bray, General Manager.

LEEDS.—Wanted (at once), qualified Manager. Please state full particulars and salary required (outdoors) to W. W. Sleight, 134 Burley Road, Leeds.

LIVERPOOL.—Wanted, beginning of September, for high-class Pharmacy, a reliable Dispenser (lady); one able to control Dispensary if required. Apply, giving usual particulars and salary required, to G. H. Cole, The Pharmacy, Blundellsands.

LONDON.—Lady Assistant required for Dispensing and Counter; outdoors; comfortable berth; two kept. Apply, stating experience, age, height, and salary required, to Dow Brothers, 44 Seven Sisters Road, Holloway, N. 7.

LONDON.—Unqualified Assistants; male or female; easy hours; good salary. Briggs, 585 Lea Bridge Road, Leyton, London.

LONDON, S.E.—Assistant wanted (outdoors) for good-class Dispensing business; lady or gentleman (ineligible); permanency; good salary. Also one for Stock and assist at Counter. Apply, stating experience, age, salary, and when disengaged, to "W." (250/31), Office of this Paper.

LONDON, S.W.—Assistant, with good Dispensing experience, required early. Please state experience, when disengaged, and salary required, Amon, Chemist, 436 Streatham Common, S.W. 16.

LONDON, S.W.—Gentleman Assistant for Dispensing and Retail in Clapham district; part-time would do. Apply, with usual particulars, R. Baubury, 186 Lavender Hill, Clapham Junction, S.W.

LONDON, S.W.—Qualified Assistant wanted; outdoors; September 14th; accurate Dispenser; good general knowledge of middle-class business; no Sunday duty, half-day Wednesdays; good references required. Apply 249/36, Office of this Paper.

LONDON, W.—Part-time; evenings; quick Store trade, Dispensing and Stock. Full particulars of hours and salary to "Senegæ" (244/40), Office of this Paper.

LONDON, W.—Young lady Assistant required; must have had good Dispensing and Counter experience; comfortable berth; good salary. Apply 247/222, Office of this Paper.

LONDON, W.—Wanted, lady or gentleman; accustomed to good-class Dispensing business; no N.H.I.; outdoors. Apply, stating full particulars, to W. A. Weston, 8 Sandringham Parade, Ealing, W. 5.

MANCHESTER DISTRICT.—Junior Assistant wanted; ineligible. State usual particulars and salary required, R. Needham, Chemist, Stalybridge.

MARGATE.—An experienced Assistant with good references; accustomed to dealing with Stock, Window-dressing, and Photographics; permanency to suitable man. Apply, with details of experience, age, height, and salary required, to D. T. Evans, Farningham Lodge, Margate.

NEAR MANCHESTER.—Assistant required; lady or gentleman (ineligible); capable of assisting in Dispensing and Retail. State age, experience, and salary required, 250/25, Office of this Paper.

SEAFORTH.—Thoroughly competent Assistant for large, good-class Dispensing business; easy hours; salary a minor consideration if a good man; must have someone. Rutter, Chemist, Seaforth.

SHROPSHIRE.—Unqualified Assistant, lady or gentleman; for good-class Retail business; must be competent and reliable Dispenser; outdoors; easy hours. State full particulars and salary required, Bates & Hunt, Wellington, Shropshire.

SOUTH OF ENGLAND.—Assistant required (male or female); free removal; permanency with good salary. Timothy White Co., Ltd., Chemists, Portsmouth.

SOUTH SHIELDS.—Wanted, Manager for Branch; lady or gentleman; able to take charge and dispense N.H.I. State usual particulars to 246/16, Office of this Paper.

SUNDERLAND.—Wanted, reliable Branch Manager; either sex; progress in salary to suitable applicant. Apply Milburns, Ltd., 95 Northumberland Street, Newcastle-on-Tyne.

SURREY.—Wanted, reliable, unqualified Assistant; must be gentlemanly; used to good-class business; not over 45; salary 70s. week, with quarters over shop; suitable for married man with no family; undeniable references necessary. Apply 246/35, Office of this Paper.

WEST RIDING (Good Healthy District).—Capable qualified Manager required for a sound Family Retail business, which is doing well; good salary, with a liberal interest in the profits offered. Apply 247/223, Office of this Paper.

WEST RIDING, NEAR BARNSLEY.—Young lady Assistant required; must be a good Dispenser; comfortable permanency; good salary. Apply 247/220, Office of this Paper.

WESTCLIFF-ON-SEA.—Assistant wanted for Dispensing business; unqualified; outdoors. Apply, stating salary required, etc., to 245/20, Office of this Paper.

WORTHING.—Lady Assistant wanted, with Dispensing experience; outdoors; good-class business. Send particulars, with reference, to W. Aston, Pharmaceutical Chemist, Worthing.

ADVERTISING PROPRIETARY.—Wanted, capable young man (discharged officer preferred) to take business control in a high-class Proprietary Business, advertising experience useful; salary £3 weekly; good prospects, together with future opportunity of investment if help is really valuable. Kindly state full particulars. 234/3, Office of this Paper.

ASSISTANT for brisk Retail and Dispensing business; good salary and prospects to a suitable man. Packer, Seaford, Sussex.

ASSISTANT wanted till end of September; chiefly Dispensing. Apply, giving full particulars, with salary required, to E. Bing & Son, Pharmaceutical Chemists, Canterbury.

ASSISTANT required; quick and accurate Dispenser; gentleman; ineligible; outdoors. Apply, stating age and salary required, Henry Davis, Chemist, 36 and 37 Northbrook Street, Newbury, Berks.

ASSISTANT (immediately); qualified or unqualified. State salary required and full particulars, E. W. Tristram, 335 Lea Bridge Road, Leyton.

ASSISTANT Dispenser wanted (qualified lady) for East Dulwich Provident Dispensary; hours 11 a.m. to 1 p.m. and 6 p.m. to 8 p.m. daily, Sundays excepted; £60 per annum. Apply Hon. Secretary, Dispensary, 193 Landells Road, East Dulwich, S.E. 22.

ASSISTANT (ineligible) required for good-class Retail; outdoors. Please state salary, age, experience, and reference, Thorp, Chemist, Bognor.

ASSISTANT wanted to take charge for 14 days, or would entertain engagement for a much longer period; outdoors. State terms and references to U. and S. Green, Chemists, Nunhead, S.E. 15.

ASSISTANT; ineligible. State experience, salary required, when disengaged, W. T. Hicks & Co., Cardiff.

ASSISTANT, unqualified, male or female, for Counter work. Apply, stating age, experience, salary required (outdoors); good reference essential. Fife, Chemist, East Twickenham.

AT once, either as Locum or permanency, qualified man for brisk, good-class mixed country business (near Manchester); fair amount of private and N.H.I. Dispensing; comfortable berth and reasonable hours; outdoors. Send photo and full particulars in first letter, Geo. F. Wild, Pharmacist, Hyde, near Manchester.

BRANCH Manager wanted (at once); must be over military age or ineligible; good salary to suitable man. Apply personally any morning except Saturday, or write, giving full particulars and enclosing if possible recent photograph, Parkes Drug Stores, Ltd., 65 Harmood Street, N.W.

CAPABLE, unqualified Assistant for our branch at Walthamstow; duties chiefly Dispensing; good salary; very occasional Sunday duty. Apply personally to Messrs. Wm. Fox & Sons, Ltd., 109-111 Bethnal Green Road, E. 2.

CAPABLE Assistant required; ineligible; short hours. Apply, stating salary required, to Manager, Drug Department, Haymarket Stores, S.W. 1.

DISPENSER required to dispense Medicines, prepare Galenicals, and assist in bookkeeping. Applications, endorsed "Dispenser," giving full particulars regarding qualification, experience, and salary required, should be addressed to Hon. Secretary, East Lancashire Homes for Disabled Sailors and Soldiers, Broughton House, Kersal, Manchester.

DISPENSER, lady or gentleman, for high-class business. Write 250/26, Office of this Paper.

DISPENSER (qualified); thoroughly experienced man required; outdoors; permanency; hours 8 to 6, Wednesdays till 1. Write, giving fullest details of previous experience, references, and salary required, to Mr. J. R. Craig, Chemistry Department, 17 and 19 Union Street, Aldershot.

DISPENSER, qualified (either sex), required, with good experience of first-class business; easy hours; permanency. Post fullest details of previous experience and remuneration required to Manager, Junior Army and Navy Stores, Ltd., Union Street, Aldershot.

DISPENSER; lady (or gentleman if ineligible for Army); used to Counter work preferred. Apply, with usual particulars, experience, salary required, if disengaged, to Managing Director, Henry Hodder & Co., Ltd., 5 Nelson Street, Bristol.

DOCTOR, near City, requires lady Dispenser morning and evening; qualified not necessary. State salary, 242/16, Office of this Paper.

ELDERLY qualified Assistant; easy hours; comfortable berth; good salary. Briggs, 585 Lea Bridge Road, Leyton, London.

EXPERIENCED, qualified Assistant required; outdoors; short hours; good salary. Apply to Mr. Marshall, c/o John Bell & Croyden, 50 Wigmore Street, W. 1.

GIRL or lad wanted (by a City Chemist), who would be willing to put up stock, do dusting, and run light errands; short hours and easy work. Reply, giving particulars and wages required, to "X. Y. Z., City" (251/25), Office of this Paper.

GOOD opening for a young qualified man; either rejected, discharged, or Grade 3; permanent and lucrative post. "H. L." (247/22), Office of this Paper.

GUY'S HOSPITAL.—A sixth Dispenser required; Minor qualifications essential; salary £150 per annum. Apply to the Acting Pharmacist.

JOHN BEACHELL, 17 Market Street, Nottingham, requires lady Assistant (immediately); must be good Dispenser. State qualification, salary required (outdoors), with references.

JUNIOR or Improver; outdoors; easy hours and no Sunday duty. Usual particulars to Lewis Jones, Chemist, Kidwelly.

JUNIOR Assistant wanted; hours 9 to 7.30, no Sunday duty. James Epps & Co., Ltd., 60 Jermyn Street, S.W. 1.

LADY Assistant, chiefly for Dispensing, Hall qualification, short hours, required at once. Apply Mr. Longstaff, John Barnes & Co., Ltd., 191-217 Finchley Road, N.W.

LADY Dispenser (Hall), experienced, wanted (at once); good hours and wages. Apply Staff Manager, Harrods, Ltd., 44 Hans Crescent, S.W.

LADY Junior Assistant required; outdoors; knowledge of Dispensing essential; comfortable berth; easy hours. Full particulars as to previous experience, etc., to G. Peck & Son, Pharmaceutical Chemists, Cambridge.

LADY Dispenser and Bookkeeper (outdoors) wanted for Medical practice in small country town on main line near London. Apply, stating age, experience, salary required, and give references to 245/3, Office of this Paper.

LADY Assistant; used to Dispensing and Counter; outdoors. Please state experience, salary, and give recent references. Bramley's, 87 Holyhead Road, Handsworth, Birmingham.

LADY Assistant required for high-class Pharmacy. Please give full particulars to E. J. Savage, 13 Queen's Road, Bournemouth.

LADY Assistant, Minor qualification, required at once; short hours. Apply Mr. Longstaff, John Barnes & Co., Ltd., 191-217 Finchley Road, N.W.

LOCUM wanted for September; short hours, no Sunday duty. Chemist, 96 Market Street, Hednesford, near Stafford.

LOCUM (fortnight in September) for small single-handed branch business; Devonshire. Apply 247/35, Office of this Paper.

LOCUM wanted to take charge from the middle to the end of September. State terms and give references, 247/25, Office of this Paper.

LOCUM for one month; good experience and reliable; unregistered; good references. 18 Wilton Road, Victoria Station.

LOCUM wanted for one or two months; also Branch Manager; good salary; comfortable place. Phillips, Chemist, Ashton-under-Lyne.

LOCUM, qualified, lady or gentleman, immediately for about a month during illness of proprietor; light duties. State usual particulars and salary, 186 Mare Street, E. 8.

LOCUM (qualified) for Dispensing and Light Retail business about 25 miles from town; about four weeks (shortly). Apply 9 Alwyne Mansions, Wimbledon, S.W. 19.

LOCUM required from September 11th for three weeks. Apply Pharmacist, County Hospital, York.

LOCUM required for two weeks; August or September; qualified and reliable. References and salary required to T., 350 High Road, Tottenham.

LOCUM, unqual. or qual., wanted from September 9 to 21 inclusive; Dispensing only; good-class business; no responsibility of management. Apply W. Parry-Jones, Chemist, High Barnet.

MANAGER (qualified) for old-established Cash Drug Store with N.H.I. Dispensing; Dispenser kept. State all particulars in first letter, or personal application preferred, Page, 186 Essex Road, Islington, N.

MESSRS. TIMOTHY WHITE CO., LTD., Chemists, Portsmouth, require a capable Pharmacist (male or female); easy hours; good and progressive salary, with excellent prospects; free removal.

NATIONAL HEALTH INSURANCE.

THE WEST RIDING JOINT PRICING COMMITTEE.

CHEMIST'S PRESCRIPTIONS.

The above Committee invite applications from Lady Pharmacists for the post of EXPERT TECHNICAL SUPERVISOR. Preference given to applicants with experience in the pricing of prescriptions and other work in connection with a Pricing Bureau.

Applications, accompanied by copies of at least two testimonials, stating experience, age, and salary required, endorsed "Supervisor," to be delivered not later than the 24th inst. to

J. A. ATKINSON, Secretary,
West Riding Joint Pricing Committee.

74 New Briggate, Leeds,
13th August, 1918.

PHARMACEUTICAL SCHOOL OF CHEMISTRY, 67 Lower Mount Street, Dublin.—The School Committee require the services of a Teacher to conduct the Practical Chemistry Class. Full particulars from the Registrar, with whom applications should be lodged not later than the 4th proximo. Arthur T. Ferrall, Registrar, 13th August, 1918.

QUALIFIED Locum wanted; last week in October and first two weeks in November; state salary required; Staffordshire. Apply 246/17, Office of this Paper.

QUALIFIED lady Assistant required; capable of taking charge of medium-class business during occasional absence of proprietor. Apply, giving usual particulars, to E. J. Latham, Pharmacist, Shirebrook, Derbyshire.

RELIABLE lady Bookkeeper and Cashier. Write usual particulars or apply personally at J. F. Ray, Ltd., 326 Oxford Street, W. 1.

SALESMAN and Dispenser wanted (unqualified) for Chelmsford and Sutton; must be ineligible or over military age. Apply personally any morning except Saturday, or write, stating salary required, when disengaged, and enclosing if possible recent photograph, Parke's Drug Stores, Ltd., 65 Harmood Street, N.W.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49 Leicester Square, W.C. 2, require a qualified Dispenser at once (either sex), temporarily for a few months or longer. Apply to the Secretary, giving references and stating terms and qualifications.

SURGICAL INSTRUMENT BUSINESS.—Assistant for Shop Counter; state age, other duties accustomed to, and wages expected. Reply "Surgical," Lee & Nightingale, Liverpool.

UNQUALIFIED Assistant, rejected, Grade 3 or discharged, for progressive Store business in healthy West Riding town; comfortable permanency, with good prospects. "W. R." (247/221), Office of this Paper.

WANTED, Locum (or good Assistant) for about three weeks in September. Please apply, stating terms (outdoors), to Clegg & Son, Chemists, Wantage.

WANTED, Chemist's Manager (qualified); Manchester district. Send full particulars, 245/4, Office of this Paper.

WANTED, for Doctor in S.E. London, Dispenser; lady or Gentleman; not necessarily qualified. Apply, state particulars and salary expected, to 245/18, Office of this Paper.

WANTED, a good all-round, unqualified Assistant for quick cash trade; hours 8.30 to 8, Saturday 9, half-holiday weekly, Sunday every third, with lady Assistant. Apply Chandler & Son, Chemists, Bristol.

WANTED, a Qualified Assistant, young, unmarried, exempt, with a view to succession; business established 84 years; Mixed Drugs, Stationery, Fancy Goods; substantial and increasing returns. Apply 236/40, Office of this Paper.

WANTED, qualified Manager (ineligible) to take complete control of Chemist's business during absence of owner on military service; medium-sized good-class Family Retail and Dispensing business; 25 miles from town. Apply, stating references and salary required (outdoors), 229/25, Office of this Paper.

WANTED (at once), Manager, lady or gentleman, for light country Retail; easy hours; permanency. State references and salary to Buckingham, Aylsham, Norfolk.

WANTED, Locum for about fortnight, early in September; outdoors; single-handed. State references (recent), age, terms, and all particulars in first letter, Neale, Mortimer Street, Herne Bay.

WANTED (at once), qualified Manager; lady or gentleman; seaside branch; ineligible. Give full particulars of experience, references, salary required, when disengaged, photo if possible, Walker & Harris, Ltd., Chemists, Sun Street, Canterbury.

WANTED, in City Dispensing business, a lady Assistant as Junior; short hours, no Sunday duty. Apply, stating salary required, Staff Superintendent, C.S.S.A., Ltd., 136 Queen Victoria Street, E.C. 4.

WOMAN Pharmacist required in September to manage small Retail business; for some years managed by a qualified woman; London district; salary 3½ guineas. For particulars apply 249/24, Office of this Paper.

YOUNG lady Dispensers required, with Counter experience preferred, for Crouch End and Wimbledon districts; must have the Apothecaries' Hall qualification; if convenient apply personally any morning, except Saturday, Parke's Drug Stores, Ltd., 65 Harwood Street, N.W.

WHOLESALE.

A GENTLEMAN about 35, ineligible, with thorough knowledge of Wholesale Drug trade (office and travelling experience desirable), to replace partner shortly retiring after over thirty years' successful work; good prospects for energetic and capable business man if successful and approved; the position should appeal to a man desiring to obtain an interest in a good provincial business; audited accounts, showing increasing turnover and profits for forty years. "Ph.C." (249/27), Office of this Paper.

ASSISTANT Town Traveller required by provincial Wholesalers; discharged man preferred; some general knowledge of trade necessary, but previous experience of travelling not essential. Apply 248/150, Office of this Paper.

ASSISTANT (ineligible) wanted at once for the Wet Department. Apply, with full particulars, to John Ismay & Sons, Manufacturing Chemists, Newcastle-on-Tyne.

BAISS BROS. & CO., LTD., require man to assist in Manufacturing Laboratory; also one for Wet Counter. Apply 175 Grange Road, Bermondsey, S.E. 1.

CHEMIST required in Wholesale house, lady or gentleman, qualified, to undertake occasional analysis. Particulars 246/33, Office of this Paper.

FITTER, Surgical, for Truss and Orthopædic work. Write, stating age, experience, and salary required, to I.D. Department, 7 Aldersgate Street, E.C. 1.

IMMEDIATELY, for London Export Druggists, ineligible or discharged soldier, familiar with Druggists' terms, as Checking Clerk; duties light. State salary by letter to 149/29, Office of this Paper.

INVOICE Clerk required for City Wholesale Druggists (male or female). Apply by letter, giving full particulars, to 148/44, Office of this Paper.

LABORATORY Assistants wanted; accustomed to the manufacture of Galenicals, etc.; permanent positions. Apply, with references, and stating experience and salary required, to Goodall, Backhouse & Co., Leeds.

LEDGER Clerk of good experience required (at once); good wages. Wright, Layman & Umney, Ltd., 46 Southwark Street, S.E. 1.

MALE or female Tablet Hand required for provinces; good knowledge of coating essential. Apply 248/15, Office of this Paper.

MAN wanted (ineligible) as Porter; used to packing Chemicals, Drugs, etc. Apply American Commerce Co., Ltd., 19 St. Bride Street, E.C. 4.

REPRESENTATIVES on commission; popular high-class Toilet article which supplies a war-time need; would suit lady travellers requiring a side line. Usual particulars of ground covered, present lines, etc., to the Menolan Co., Ltd., 233 Bristol Street, Birmingham.

SENIOR Invoice Clerk (female) required. Apply by letter, stating experience and salary required, to Hopkin & Williams, Ltd., 16 Cross Street, Hatton Garden, E.C. 1.

SHORTHAND-TYPIST (Junior) required for City Wholesale Druggists. State salary required and full particulars, in confidence, to 148/440, Office of this Paper.

TABLET Maker or Granulator wanted; Liverpool; permanent post; good salary. Apply 137/18, Office of this Paper.

TRAVELLERS wanted to carry additional side lines on commission; good quick-selling articles; must have good connection among Chemists, Grocers, Co-operative Societies, etc. State ground covered and give full particulars, in confidence, 247/4, Office of this Paper.

WANTED, Invoice Clerk, Under-Warehouseman, and Wet Counter Hand; males or females. State experience and wages required, Gale & Co., Ltd., 15 Bouverie Street, E.C. 4.

WANTED, Under-Warehouseman in Wholesale Druggists. Apply Hodgkinson, Prestons & King, 262 Bishopsgate, E.C.

WANTED, Traveller for the North of England; also one for London; splendid side line; must have good connection among Chemists, Stores, and Co-operative Societies; only those prepared to take a small financial interest on a favourable basis. Write, in confidence, full particulars to "Proprietary" (245/12), Office of this Paper.

WANTED, experienced Tablet Machinist. Apply W. B. Cartwright, Ltd., Tablet Makers, Rawdon, near Leeds.

WAREHOUSEMAN for London Perfumery and Toilet Goods Factory; must be reliable Stockkeeper, able to keep neat and exact records; experience with shipments in Bond, making out abstracts, and clearance through Customs desired; good salary to suitable man desirous of improving his position. Write, in first instance, giving full details of capabilities, to 143/34, Office of this Paper.

WAREHOUSEMAN with good experience of Patents and Sundries; ineligible for military service. Apply Managing Director, Henry Hodder & Co., Ltd., 5 Nelson Street, Bristol.

WORKERS (male) wanted for Chemical Laboratory dealing in Pharmaceutical Specialities, etc.; must have Chemical and Pharmaceutical knowledge (qualified or unqualified); ineligible. State experience, salary required, and send copy of reference to Box 627, Smiths' Agency, Ltd., 100 Fleet Street, London, E.C. 4.

SITUATIONS OPEN.

(Colonial, Indian and Foreign.)

JAPAN.—Wanted immediately, an Assistant (qualified preferred) in a first-class Chemist's business at Kobe; easy hours; four years' contract; passage paid out and home; must be ineligible for the Army. Send for full particulars, with photo, to J. W. Franklin, 28 Alleyn Road, London, S.E. 21.

FEDERATED MALAY STATES.—Qualified Assistant; young; single; ineligible Army; three years' engagement; passage paid out and home; one of the best businesses in the States; fine climate and country. Apply, stating salary required, Dakin Brothers, Ltd., 82 Middlesex Street, London, E.

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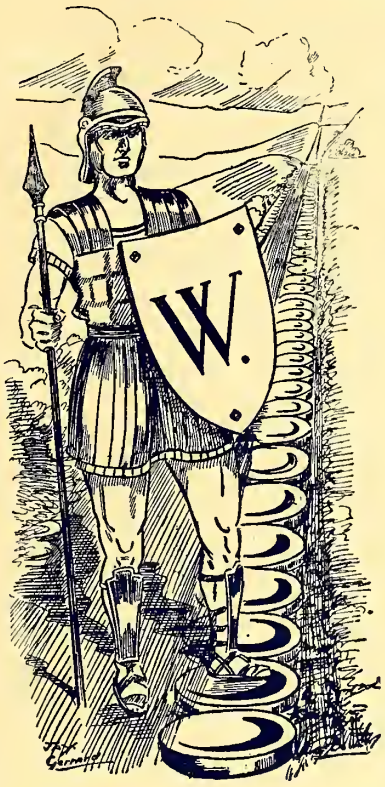

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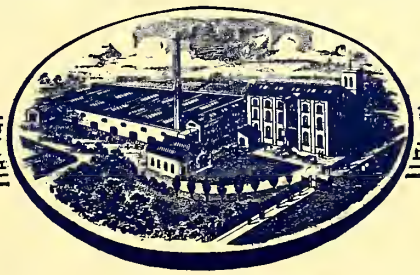

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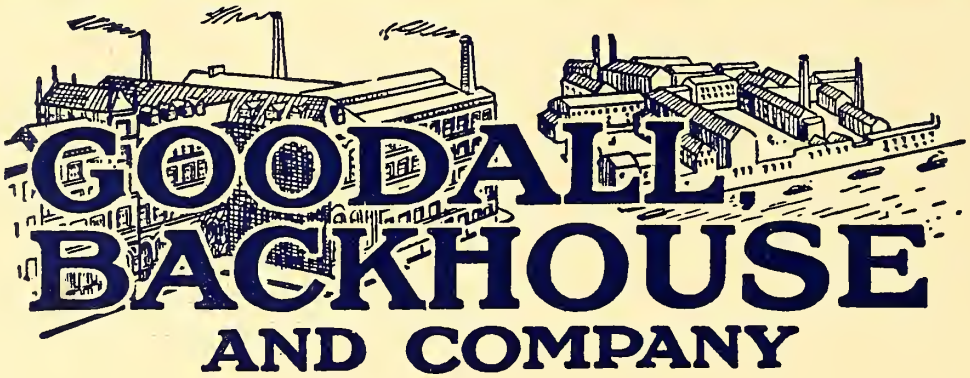

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